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ABSTRACT

A variety of physical activities and their applications to special education situations are presented and discussed in this collection of papers. Topics include--games for exceptional populations, mime and movement, behavioral management techniques, motor development programs for the handicapped, teacher and student motivation, yoga for the handicapped, motology, preadolescents, management of assaultive behavior, muscular dystrophy, therapeutic recreation, effects of drugs on growth, and others. (DS)

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Seventh National Conference
on

PHYSICAL ACTIVITY

for the
Exceptional Individual

presented by
"THE ALLIANCE"

in cooperation with

The Office of the Los Angeles County
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PHYSICAL ACTIVITY FOR THE EXCEPTIONAL INDIVIDUAL . . . THE CHALLENGE AND THE REWARD

As I look over this year's program I am immediately struck by the outstanding selection of presentors. They truly represent the complete range of exceptionalities, disciplines, theories, practices, educational settings, and geography. We are pleased to bring together, for the seventh time, leaders from throughout the world to share with you their ideas, endeavors and dreams.

G. Robert Roice
Conference Director

In my first year as program chairman I am truly impressed with the number of dedicated professionals anxious and willing to share their ideas with other equally concerned professionals and students in the field of physical activity for the exceptional individual. We have brought together people from many fields serving many exceptionalities and it is my real hope that you can take something from this conference that will improve the quality of life for those we serve.

A special thanks goes to Terry Scott, Syllabus Chairman, for the many hours spent putting this book together. I am sure the information it contains will be of value for years to come.

Wally Williams
Program Chairman

Contents

New Games for Exceptional Populations 7
Bill Michaelis, Jody Rose-Dressler

Mime and Movement Exploration — An Effective Tool to Foster Interaction Between Children of Multiethnic Background 10
Dr. Friedrich J. Schneider

Behavioral Management Techniques Applied to Physical Education 20
Ron French

The Bottom Line 24
Martha M. Mawhinney, Sheila Weber, Carol Cox

The Evaluation of Motor Development Programs for the Handicapped 27
David Auxter

Stimulating the Right Hemisphere 31
Darrel W. Guthrie

How to Change the Games Children Play 35
G.S. Don Morris

Exploring Movement Patterns Through T'ai-Chi Chu'an 38
Mitchell Gordon Lewis

Realistic Approaches to Teacher and Student Motivation 42
Robert L. Campbell, Ph.D.

For For It — Going Beyond the Limits 48
Tim Hansel, Dave Willis, Joyce Shadburn, Tim Gaffney

The Movement Mystic 56
Dr. James L. Ballinger

Individualized-Personalized Strategies and Activities for Complying with Public Law 94-142 65
Thomas M. Vodola, Ed.D.

The Implementation of Yoga as a Discipline in Teaching the Exceptional Individual 74
Georgia Hall, M.A.

Designing a Motor and Language Program for the Severely Developmentally Disabled Child 78
Bonnie Stubbs, Peggy Reagan, Nancy Thompson, Betty Williams, Dolores Sweigart

The German Model of Motology 82
Dr. Ernst J. Kiphard

The Pre-Adolescent: an Exceptional Individual 86
Dr. Friedrich J. Schneider

Management of Assaultive Behavior 94
P.A. Smith

Early Duchenne Muscular Dystrophy 96
Randall S. Benson, Errol Levi

Orff-Schulwerk: Adaptations for Special Populations 99
Sue Flothe

Therapeutic Recreation: A Successful Leisure Time 103
Rochelle A. Swanson

Modern Kinesiology and the Individual Education Program 106
David Auxter, Ed.D.

New Games for the Handicapped 110
Anne Riodan

Physically Handicapped in the Regular Class: Elementary Adapted Physical Education and Hospital Physical Therapy 115
Vicki Powell

A Sound and Movement Workshop/Demonstration with Theatre Unlimited 118
Randy McCommons, Brin Quell

Obstacle Course Relays — A Tool to Remediate Sensory Motor Deficits 120
Tom Marsh, Bruce Thiele, Sally Warner

Minimal Brain Dysfunction — Birth Weight, Physical Size, Stigmata, Bone Age — The Effect of Drugs on Growth 126
Leon Oettinger, Jr., M.D.

In-Service for Rural Areas — Idaho 131
Ernest K. Lange

The Heartbreak of Kickball, Dodgeball and Drop the Hankie — Elementary School Physical Education: The Bases for the Basics 137
Rudy Benton

Jazzercise — A Participatory Session 141
Judi Sheppard Missett

The Trampoline as a Means of Movement Diagnosis and Therapy 143
Dr. Ernst J. Kiphard

The Importance of Motor-Activity as it Relates to Vision and Learning 147
P.N. Klingsheim, O.D.

The Human Race — An Exceptional Marathon Runner 152
Pete Strudwick

New Games for Exceptional Populations

Bill Michaelis, Department of Physical Education, Cal-Poly, Pomona; Jody Rose-Dressler, Remedial Physical Education Specialist, San Mateo County Schools

Come Play With Us!

A New Games approach to special populations offers leaders several unique advantages for successful programming. Among them are the creation of a playful attitude, inviting barrier free atmosphere and a wide variety of funfilled choices. Central to this approach is a clear understanding of game flexibility, game change and sensitive leadership that gradually empowers the group to create and own its own play. You'll learn about playing by playing.

Play Hard — Play Fair — Nobody Hurt

The unique nature of each person is a result of the combination of all the unique but specific factors which comprise his total being. Each individual possesses specific abilities but those who excel in one area do not necessarily excel in others. Each individual has specific capabilities within each performance area. Many children with special needs have known little more than failure and frustration in a society that places great importance upon competitive sports. These students find it hard to compete in a world of structured organized athletics where they grow up with little confidence in their motor ability, social skills, self image and a great reluctance to try new activities.

How can one deal with these realities? There are several major

strengths that a New Games approach has in working with special populations.

1. Attitude

Emphasis is placed on fun where the people are the most important part of the game. Many disabled children and adults have had little opportunity to play. New Games means everyone playing their hardest and as well as they can — just for the fun of it. Players compete as partners who give each other the chance to play well.

2. Inviting Atmosphere

New Games provides an inviting atmosphere that enables participants to acquire the skill of making choices (i.e. a tournament is being held at a school for developmentally disabled students of all ages with aides and referees). The students have the choice of different level games as well as picking up a frisbee or other equipment that has been made available for individual play. They are not told where to go but given clearly explained choices.

3. Breaking Down Barriers

New Games breaks down barriers with regards to ability and provides activities for different levels of involvement to play together (i.e. when working with a mixed group of different ability levels modification of the game can be used so everyone is challenged and the game is still the same). You may have a person in an electric wheel chair partnered with a person with slight cerebral palsy in a tag game. Other members of the game may be slowed down by hopping or using other types of locomotion. This involves mainstreaming and flexibility with regard to a sensitive leader.

4. Game Change

Game change starts with a sensitive leader who realizes when it is time to turn the game over to the group while remaining a participant in low focus rather than high focus involvement.

Teachers must understanding the structural game components (i.e. rules, space, numbers and the power that the "it" has in any game to be successful). Modifying the game to balance the level of challenge and success for all participants helps keep it in the fun place and thus motivates more participation. By changing the rules you can determine

just how difficult it will be to "win" the game (i.e. if a group is having trouble finding the marble in "Red Handed," try a circle game where the players try to fake out the person in the middle by passing or pretending to pass an object amongst themselves). The rule can be changed that the tapped player has to show both hands instead of one, or have two objects going around the circle. You may want to use something larger than a marble for more involved individuals or you can have your students hold a circular piece of yarn to keep them in position and attach a wooden block with a hole in the middle of the yarn to pass through.

5. Empowering

Gradually as the group comes to develop a playful sharing atmosphere where they have the opportunity to own or change games the feeling of power and self-worth is generated in a supportive creative environment. The structure of New Games is very fluid, encouraging players to move freely from one activity to another. When a person feels a part of the group and a part of the game they can more easily begin to change the rules to experience the game on a new level or introduce a New Game.

Each of these aspects play an important part of the total value system of New Games. The over all picture, however, encompasses a playful atmosphere of growth in a play community. What you get out of the New Games concept is not a list of games but rather an attitude regarding play.

Mime and Movement Exploration — An Effective Tool to Foster Interaction Between Children of Multiethnic Background

Dr. Friedrich J. Schneider, Department of Movement, Health & Leisure, Boston University

Characteristics of Children of Multi-ethnic Background

The "disadvantaged," the "culturally deprived," and the "educationally disadvantaged" were names used by educators and researchers during the 1960s to describe urban and rural minorities. It was during that time that the Office of Equal Educational Opportunity and other private foundations funded a variety of programs in schools and communities in order to assist in the education of the underprivileged.

Kenneth Clark (1968) spoke of the "clash of cultures" in reference to the assumptions of teachers and administrators that the underprivileged child performs below expectations. The educator who openly announces this belief in the inferiority of the student only adds to the student's low self-concept and poor performance.

The desegregation movement of the 1970s adds an additional factor to the education of the minority group member. The busing of children to achieve desegregation causes another "clash of cultures" only this time it is a clash of multi-ethnic as well as multi-socio-economic groups within the classroom.

We can only assume that the exceptional student in this new and special setting still displays the characteristics which identified him as deprived or disadvantaged in the 1960s.

Noar (1967) saw this special child as: frustrated, lacking ambition, unable to be organized and not oriented towards tests, speed, promptness, time and competition.

Morlan and Ramondo (1968) found the disadvantaged child lacking: relevant educational readiness, experiences, confidence and self-concept, interest in the abstract, respect for authority, adequate language skills and desirable behavior.

Miller and Swanson (1960) described the learning patterns of these children as motoric in that the child must manipulate objects physically in order to perform adequately.

Riessman (1964) adds to this physical dimension the observation that the deprived child has a more physical pattern of communication. "Verbalization may be initiated by sensory images, but it may also occur in the richest form in the presence of non-verbal stimuli."

Aspects of Movement Exploration

Visual and kinesthetic cues assist the youngster in establishing communication on a non-verbal and/or verbal basis. The "clash of cultures" in a desegregated classroom situation also reveals different non-verbal communication styles, just as is the case with verbal expression patterns.

Interaction in a multi-ethnic and multi-social situation is facilitated if the members of such a setting are "better able to assess and utilize such factors as facial expression, posture and gestures when judging meanings transmitted by others."

In an attempt to outline purposes and principles of functional movement in man, Morrison (1969) writes in *The Movement Approach to Educational Gymnastics*, "Movement is the child's first mode of expression and the first means of investigating its environment." Cratty (1964) defines movement as "a fundamental dimension of human behavior," giving support to thoughts, experiments and conclusions of psychologists. These two educators are joined by a movement therapist, Norma Canner (1968), who expresses her observations by writing, "For the young child, movement is a way of exploring and discovering his world and himself." Movement behavior reveals to the observer the developmental level of the child. Every child must be active in order to

develop to its full potential. Through activity, it grows physically, socially and psychologically.

"Movement may evoke more than one quality or more than one illusion or association at once. It may evoke many things simultaneously, such as feelings and images" hypothesizes Litvinoff (1971-1972) in an attempt to give support to the importance of movement in the development of creativity and expression.

Movement of the entire body is used to be expressive. The child must make use of all of his physical properties and his environment in order to be understood. The creative aspect of movement is essential to Canner (1968) who sees in dancing with young children a media that provides them with "an opportunity to explore and discover their bodies, their feelings and the textures, shapes and sounds around them, alone or in a group."

Dancing, a creative movement, is expressive and communicative. H'Doubler (1940) says, "Dance, freeing the body from needless inhibitions and breaking down some of the unessential reserves, frees the personality for a wider and more satisfying life." The child expresses through his body not only how he reacts to his environment, but also how he feels, thinks and grows as an individual. Using his body as "a tool of expression" he reveals his developmental stage and offers to the observer information about his maturation level and motivation. His motor behavior is the key to his personality.

The expressive and communicative aspect of movement must be recognized by the parent and the teacher alike. Both must interact in supplying the child with movement experiences which present a multitude of challenges for self discovery and growth.

Movement Exploration enables the individual to become cognizant of the movement range and capabilities of his body in relation to time, space, and force. It guides him in a creative exploration of movement possibilities and creative expression of himself. In offering a multitude of experiences which demand the transformation of memory-stored movement patterns and which force the individual to adapt the movement material to the required form — time, space, force — an atmosphere of artistic expression is established.

Fischer (1963) states that, "In order to be an artist it is necessary to seize hold and transform experience into memory, memory into expression, material into form." Fischer continues, "But emotion for an artist is not everything. He must know his trade and enjoy it, understand all the

rules, skills, forms and conventions." The progression from emotional to creative expression depends on *knowledge, skill* and *understanding* of movement.

Understanding of movement and its relation to the acquired skills is reflected in an autonomous physical behavior pattern which mirrors past experiences. Birdshistell (1970) supports the above by writing, "While body motion behavior is based on the physiological structure, the communicative aspects of this behavior are patterned by social and cultural experience." This communicative body motion behavior, brought about through interpersonal relationships and social interaction, leads the individual to successfully develop a movement vocabulary consisting of posture and gesture. In regard to the family, Siegel (1974) states, "The interchange of posture and gesture is one of the most effective means of communication available to parents and young children before the development of language."

Aspects of Mime

Pantomime is posture and gesture in a formalized style. Alberts (1971) writes in reference to pantomime, "Pantomime as an art form is fundamentally concerned with the communication of experiences." He summarizes the basis of pantomime as communication by saying, "The essence of the art is in the communication between one individual and another, by movement and gesture in terms of understanding and experience." The basis of this non-verbal communication is derived from imitation, and the imitated situations are stored in the mind as a movement pattern in order to be readily available to represent thought, emotion, or comment during communication with others.

Pantomime can become a valuable tool in communication either as a purely non-verbal interaction or as a non-verbal support of the verbal communication. "Miming" is looked at by Siegel (1974) from two different aspects:

> But the word miming has a double reference: It means to imitate and thereby to communicate without the use of words. The linking of imitation to non-verbal communication results in an exceedingly complex process, difficult to conceptualize, analyze or even to describe. It has to be experienced.

In addition, Siegel (1974) adds:

> If mimicry uses both imitation and representation, and if

miming is mimicry by means of the body, its relation to verbal communication can be established. Thus, despite the considerable amount of pure imitation of ordinary body movement taking place in mime, its representative function is its most important characteristic, all the more prominent because of the absence of the spoken word.

Birdwhistell (1970) as well recognizes the long-standing importance of gesture in the arts, writing:

> There is nothing new about the recognition that formalized gestures play a role in communication. Theatrical performances, whether centering around dancing, drama, opera or the mime have long emphasized the role of gesture, particularly in its stereotyped or conventional form.

Barlanghy (1967) sees pantomime as, ". . . a play without words; thoughts that in the literary theatre are voiced in sounds and syllables are in Mime expressed by the body of the performer."

Hunt gives an interpretation of pantomime which states, "True pantomime is the transmission of an idea by movements and postures of the body. It is not the expression of words by bodily gestures as in the game of charades, but the direct transmission of thoughts and feelings by means of the body alone." This definition gives support to Arnheim (1948) who states, "The phenomenon of expression is discussed as a physical manifestation of physical processes."

Thus, pantomime is a conscious utilization of the body to be expressive, requiring skill to handle the body and the abilities to perceive experience and to transform this perceived experience into physical expression.

Naverre (1966) states that, "True pantomime follows nature in all her moods. If it deviates from her for an instant, the pantomime becomes fatiguing and revolting." This statement of Naverre's finds expression in the writings of Barlanghy and Enters, both pantomime artists, who insist that the representation of reality is essential in pantomime in order to be understood and to have an impact.

In discussing the essence of pantomime, Barlanghy says, "Mime stems from two primitive instincts of man: from his urge to imitate and create and from allowing his imagination to soar."

The novice to pantomime, most of the time, will portray himself. He will imitate his life, his character and his thoughts. If we educate

TABLE I

THE PROGRESSION OBSERVED IN A PROGRAM OF MOVEMENT EXPLORATION AND MIME

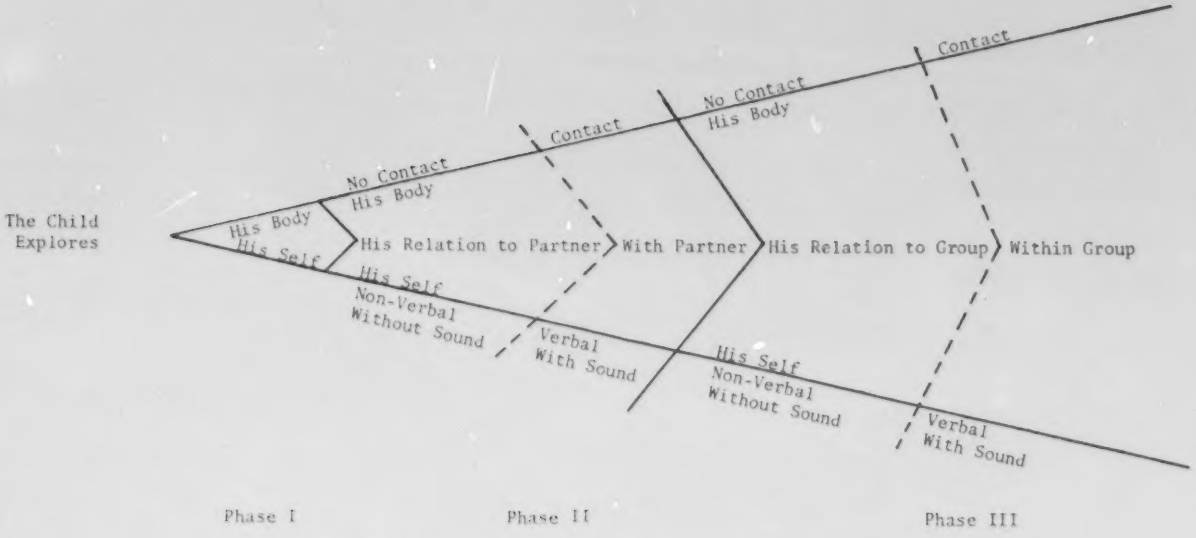

TABLE I (Continued)

Methods

Relaxation Techniques:

Gunther
Jacobson
Schultz

Exploration Of:

Time, Space, Force, Flow →

Basic Locomotor Activities:

Walk, Turn, Slide, Jump, Skip →

Basic Mime Technique:

→

Stylized Walk	The Wand	The Wall	The Balloon	
Stationary Walk	The Table	The Rope	The Sport Activity:	Bowling
Imaginary Object	The Assembly Line	The Cell		Baseball
Imaginary Barriers				Tennis

Moods and Emotions:

Joy, Pleasure, Anger, Fear, Doubt, Modesty, Horror, Fatigue, Despair, Happiness →

youngsters to move, the most essential part of this education is the stimulation of their imaginations. In addition, it is our responsibility to teach them how to communicate with others.

The Program of Movement Exploration and Mime
(See Table)

The program centers around the rationale that children of different ethnic backgrounds will be most comfortable in an atmosphere that is non-threatening and supportive.

The initial activities therefore must give each individual a sense of accomplishment and assure him of his capabilities. Since a healthy body image is formed by the way the individual perceives himself from within, the activities must first be geared toward self-exploration.

1. Relaxation Methods is the first phase which permits a tuning in to the self: Gunther — Sense Relaxation; Jacobson — Progressive Relaxation; Schults — Autogenic Training.
2. Basic movement theory of Laban applied to suit the child is the second major phase. Here the individual explores space, time, force, and flow in relation to individual body parts, standing or sitting; and basic locomotor activities such as walking, turning, sliding, jumping, with or without support. In order to enhance a more complete body image, social interaction must take place, since the individual sees his body in relation to others and how others relate to it.
3. Partner exercises and partner theatre games are the third major component. The activities all have a concrete image and solicit a non-verbal, no-touch reaction. Among these activities are familiar tasks such as mirror image movement, reactions to movement words (slash, kick, throw, etc. for arms; pick, rub, grab, squeeze for hands; stomp, tip-toe, etc. for legs; smile, frown, yawn, etc. for the face), and acting out creative movement stories alone and with the partner.
4. The exploration of movement stories based on simple mime techniques builds movement and body consciousness. Focusing on individual, partner, and group practice, the mime technique training progresses from the stylized walk to the stationary walk and from miming simple objects to miming abstract concepts.
5. In addition to movement situations based on the creation of illusions, the next phase of the program focuses on the expression of emotions by means of facial expression, posture and gesture.
6. The program concluded with a segment on mime. Emphasis was

placed on interpersonal communication through human touch and sound. Sound was not restricted to the human voice.

The goals of the program of movement exploration and mime are: to assist every child to become body-conscious; to teach tools of expression and communication; to instruct on how to interpret the non-verbal cues of facial expression, posture and gesture; to guide the youngsters in establishing social interaction; and to use the program content and situation for enhancing interpersonal relationships.

The outline program of movement exploration and mime grew out of movement education experiences with pre-school through college students. It was adapted to the needs of exceptional children and the elderly and was highly successful in an experimental school for gifted but disadvantaged youngsters in the state of Kentucky.

Each session in the Boston University Project demanded creativity and flexibility from the teacher who, in order to keep the interest of the participants, needed to be sensitive to both the non-verbal reactions and the verbal cues of the groups. The problem solving tasks created an open and free atmosphere. The content of the sessions, chosen from the stories of popular television shows such as *Kung Fu* and *The Six-Million Dollar Man*, motivated the children to come up with their own suggestions and to create new experiences.

Evaluation

An informal questionnaire was given to the children at the end of their residential camp experience. The results ranked the Movement/Mime segment among the most successful and best-liked program components. Subjective observations from the section leaders and the instructor himself supported the hypothesis underlying the rationale for the program's inclusion in the curriculum: mime and movement exploration activities enhance the communication between multi-ethnic group members and assist in the establishment of interpersonal relationships.

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Behavioral Management Techniques Applied to Physical Education

Ron French, Associate Professor, Division of Physical Education, University of Utah

An epidemic is spreading through the schools. Based on the results of the annual Gallop poll on education, the American public ranked discipline as the number one problem eight out of the last nine years (Return to the Rod, 1977). This concern by the public is not without justification. Researchers have reported that in some schools the teacher may spend twenty to thirty percent of the instructional period in an attempt to manage behavior. This problem has reached such proportions that the summer issue of the *American Educator* (1978) was entirely devoted to the problems teachers face in the classroom.

Physical educators are not immune to the rash of behavioral problems. This is particularly true at the secondary school level. For instance, a visitor touring a high school gymnasium may find students participating in a physical activity labeled a "Lifetime Sport," who lack the fundamental motor skills and the understanding of the rules and strategies of the activity. The physical educator is standing on the sidelines assuming the role of tournament director and protector of life and limb. Mosston's (1966) command style method of instruction is being applied in this type of program, but by whom?

Those individuals specially trained to instruct special physical education classes are not without their problems in the area of behavior management. This is clearly brought out in a paper presented by Roice (1978), a Special Physical Education Consultant for the County of Los

20

Angeles, entitled, "It's Hard to be a Leader When Your Class is Rioting Behind You."

With the implementation of Public Law 94-142, "Education for All Handicapped Children Act of 1975," the behavioral management problems in physical education are getting worse. Now mild and moderate behaviorally disordered students are being integrated into regular elementary and secondary school classes; with serious and profound behaviorally disordered students being enrolled in segregated classes that are provided physical education instruction by specialists.

The need for structured techniques to manage behavior in physical education is well documented (Dunn, 1975; Roice, 1978). The purpose of this paper is to briefly summarize five specific behavioral management techniques.[2] These techniques can be effectively employed by a physical educator in an integrated setting. The last three also have application for use in segregated settings with severe behaviorally disordered students.

1. *A behavioral contract* is a written agreement between at least the teacher and the pupil, which specifies what each person will do for a specific time period. Many authorities consider behavioral contracts to be the most sophisticated behavioral management technique.

There are three basic types of contracts. First, there is the manager-controlled contract where the teacher/manager determines the target behavior(s) and reinforcement(s). This type of contract is referred to as a proclamation. Secondly, there is the pupil-controlled contract where the pupil determines the task and the reinforcement. Thirdly, there is a mutual contract where both the teacher and the pupil determine the terms of the contract together.

Researchers have demonstrated that these types of contracts all have the potential to change or maintain behavior, particularly when combined with a token economy system.

2. Some techniques involve *group consequences* that require students to control each other's behavior in order to increase the probability that they will be reinforced. In physical education classes, squads provide a natural grouping system. Each squad member uses peer pressure to control the behavior of the other squad members.

This approach has proven to be very successful in classroom settings and in certain instances was found to be superior to individual reinforcement in managing behavior. One form of behavior management that is based on group consequences is the Good Behavior Game.

3. *Deprivation* is a common technique used to eliminate maladaptive behavior. This technique is based on the premise that the effectiveness of a reinforcer can be increased by depriving or holding back a desired reinforcer. If a physical education teacher uses food as a reinforcer in class just before lunch, she will find it more effective than immediately after lunch since three M&M's will not be an effective reinforcer to a pupil who has just eaten a whole bag of them! Deprivation is commonly used in physical education in cases where a trip to the water fountain is withheld or lunch is delayed until the performance of a task or the demonstration of a behavioral objective meets with the teacher's approval.

4. *Time-Out* is another technique utilized to eliminate or condition behavior. In this approach a pupil is neither punished nor reinforced. Further, this technique requires the immediate withdrawal of a pupil from a reinforcing situation when a pupil demonstrates inappropriate behavior. The pupil's maladaptive behavior is hopefully eliminated or at least controlled by placing him in a totally non-reinforcing solitary environment (i.e. a neutral environment). This procedure is an effective means of managing numerous behavioral problems in physical education.

The mildest time-out technique is ignoring an inappropriate pupil response. This type of pupil response could also be a mistake and the pupil may then be able to correct the behavior himself.

A slightly more aversive time-out technique is relegating a pupil to a corner in the gymnasium, pool or playground. This would be followed in severity by a time-out approach in which the pupil is placed outside the activity area and out of the sight of his peers. The last step in a continuum of increasingly severe time-out techniques would be to place a pupil in a designated time-out booth.

5. *Extinction* is the technique of eliminating an inappropriate behavior by removing the known consequence that maintains or increases it. Many times a pupil misbehaves because he knows that misbehavior gains more attention than appropriate behavior. In other words, the physical education teacher can eliminate or extinguish maladaptive behaviors by simply ignoring them. Sometimes teachers unknowingly reinforce inappropriate behavior by paying attention to it.

Extinction is the most effective way known to permanently remove an inappropriate response. This technique is also most effective when combined with positive reinforcement.

In summary, physical educators must possess the competencies necessary to manage class behavior if they are to assume the role of an educator. The techniques presented in this paper are examples that can be appropriately applied to physical education.

Notes

1. Not all students participate; some just sit.
2. This information taken from an unpublished paper by R. French and P. Jansma. *Discipline and Behavior Management in Physical Education.* July, 1978.

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The Bottom Line

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It appears that adaptive physical education at the secondary level for the less severely handicapped needs a basis from which to work. Minimally, this should include a fundamental understanding of and remediation for respiratory problems and common juvenile growth disorders.

Respiratory Conditions and Breathing Improvement

The greatest majority of students with respiratory disorders are diagnosed as having asthma and/or respiratory allergies. Because of the pulmonary restriction associated with this condition, it is paramount to instruct the students in proper breathing techniques, i.e. diaphramatic breathing, lateral costal expansion and pursed-lip exhalation. Mastery of these techniques will increase self-confidence. The student may then be willing to participate in an aerobic conditioning program which can increase lung capacity and activity tolerance.

Poor posture may also be associated with chronic respiratory disorders. Therefore, postural assessment and appropriate exercises may be indicated to allow for an increase in lung capacity.

Orthopedic Considerations

Osgood-Schlatter's disease — this condition is represented by a painful, tender and sometimes enlarged tibial tubercle caused by a pulling and/or tearing away of the tuberclue at the attachment of the patellar tendon. Exercise remediation is *not* indicated as this would

aggravate the condition. Eliminating stressful lower extremity activity is generally the treatment of choice.

Chondromalacia Patella — this condition is characterized by a softening and degeneration of the cartilage on the underside of the patella. Currently, exercise remediation encompasses a continuum from isometric through progressive resistive exercise (PRE) of the quadricep muscles. Where the student begins on this continuum is dependent upon the degree of pain experienced and/or the physician's recommendation.

Other orthopedic disabilities, such as chronically dislocating knees and post-fracture rehabilitation, would follow an exercise progression similar to that described for chondromalacia.

Individualized Exercise Programs

Assessment — considering the student's medical diagnosis, an evaluation of the student's muscular strength and flexibility is needed to provide the basis for developing that student's individualized exercise program. Such a program includes general conditioning exercises and remediation exercises, if appropriate. Most conditions do not have specific remedial exercises, but virtually all of the students can benefit from a general conditioning program.

Structure — many adaptive P.E. students are unmotivated since previous physical education experiences have not been successful. Consequently, the exercise program needs to be highly structured to ensure participation. This can be accomplished by utilizing time-frames during which each student is expected to perform a particular exercise. The student knows what exercise to do based on his or her individual card. The teacher refers to the master sheet which indicates what exercise each student does per time-frame.

At the high-school level, these exercise programs have been built around a Universal weight machine, free weights, and mat exercises. When the Universal machine is not available, the other options are utilized.

Initially, the students may balk at the tight structure, but they adjust rapidly, and, in a matter of approximately three to four months, show marked improvement in muscular strength and flexibility.

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The Evaluation of Motor Development Programs for the Handicapped

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The evaluation process involves a plan to determine the degree to which intended outcomes have been achieved. Subsequent hypothesized instructional strategies can then be made in an effort to increase program effectiveness. For the purposes of this discussion, the planning, implementation and subsequent decision from evaluation data will be applied to the "Individual Education Program" of the Education for All Handicapped Children Act of 1975 (P.L. 94-142). Implementation procedures of the "Individual Education Program" (IEP) provide a data base for the ongoing educational development of each handicapped child. The central focus of the evaluation process is on data collection of the conduction of the instructional processes of pupil learning curricula utilized by the pupils that produce learning, and competencies of teachers to effectively implement instructional strategies.

Although there are many aspects to evaluation of the motor development of handicapped children, the format that will be discussed in this paper will be on the nature of the general content of evaluation. Legal precedent will be examined which provides justification for the selection of evaluation content. Implications for the utilization of the data obtained for program improvement will also be discussed.

Evaluation of the Learning Outcomes of Handicapped Children

The central mission of the "Individual Education Program" of P.L. 94-142 is documentation of measured ongoing development of the educational progress of each handicapped child. In as much as federal statutes indicate application of defined instructional procedures to produce the learning of the child, these procedures and the learning outcomes are the focus of evaluation. Other dimensions of evaluation contribute to the facilitation of the educational development of the individual child.

How Learning is Evaluated

The purpose of the "IEP" planning conference is to plan for the learning outcomes for handicapped children. This conference is a joint venture between the school and the home. The essential mission of the planning conference is for the school to indicate to the parent specifically where the child is at present in the educational curricula, and what is to be learned over a specified time frame. Thus, evaluation of learning can be determined by 1) examination of the record of achievement by the child on the I.E.P. and 2) examine child performance on instructional tasks to determine the behavioral validity of the data recorded on the I.E.P. Such a procedure will enable determination of the validity of the established I.E.P. and provide comprehensive information about the operations of the instructional system. Furthermore, it will provide insights into the subordinate components that may require further and more intense evaluation. Some of the prerequisites to learning that require further examination are: 1) the constructional effectiveness of the curricula, 2) personnel conducting the program, 3) the specificity of the written IEP, and 4) the training efficiency of the teacher by the personnel preparator.

Evaluation of the Curricula

Educational progress as a result of implementation of the Individual Education Program is measured via acquisition of skill on tasks which are in behavioral hierarchical sequences. Therefore, it is desirable that the instructional materials be prearranged prior to instruction with behaviors linked together to provide a continuum of development. Through this arrangement of learning experiences it is possible to

indicate present levels of educational performance for a wide range of learners, and test the measured learning progress through attainment of short term instructional objectives. Furthermore, it is desirable for the curricula materials to be self instructional and self evaluative, so that different learners can be progressing at their own rate in activities which are relevant to their needs. The nature of the experiences that pupils are provided in their education should be a matter or record to systematically coordinate the efforts of the children. If a child is having problems in learning, there can be in-depth study of what was planned and child progress through implementation and judgments on changes which should be made in the sequential learning experiences or methods of instruction to better facilitate educational gains by the children.

Evaluation of Personnel Who Conduct the Individual Education Program

The instructional process of the individual education program is explicit with regard to the procedures which should be employed by the teacher. The records kept by the teacher, and the techniques that are applied to increase the learning of children are critical aspects of personnel evaluation. Although accuracy in recording a child's present level of educational performance and the acquisition of short term instructional objectives are important, the implementation of teaching procedures which employ the application of learning principles are essential to the evaluation process. Teacher and supervisory evaluation must take place at sites where implementation of a learning management system for both the pupils and the teachers are in operation.

Evaluation of the Content of the Individual Education Program

A major thrust of the individual education program is parental involvement in the educational planning process so they will have opportunity to plan for the development of their child. Each child's aspirations and environment make differential planning essential. Thus, accommodation of parental input and the child's when possible, must be considered when construcing the IEP. The plan should reflect educational outcomes relevant to the current and life long needs of specific children. Evaluation concerns of the IEP should involve normalization principles with respect to: 1) age appropriateness of the task, 2) ability level of the child, 3) placement in the least restrictive environment, 4) and the cultural relevance of social learning

experiences. Evaluation of the contents of the IEP against these criteria are important.

Evaluation of the Conduction of the I.E.P. Process

The "Individual Education Program" of P.L. 94-142 defines educational practice in a generic manner. Therefore, it is necessary to evaluate the performance of teachers in the conduction of educational practice with handicapped children. The courts have made it clear that there must be documentation of the educational progress of handicapped children so that parents and other service providers can systematically contribute to the educational development of the child through the implementation of the IEP.

The definition of educational practice set forth in the "Individual Education Program" makes it necessary for those who conduct inservice and preservice training of personnel who are to implement instruction to be in concert with these specific practices. Thus, there should be detailed evaluation of personnel implementing instruction in the classroom, as measured against legally defined instructional practice and training provided to conduct these practices.

Summary

The Education of All Handicapped Children Act of 1975 has incorporated the "Individual Education Program" to guarantee each handicapped child equal educational opportunity. The fundamental evaluation of such education is focused on the learning outcomes and rate of educational progress in the intact classroom. The "IEP" defines instructional practice for documenting the learning of children. This requires technical skills by curriculum developers and teachers. Essential to the conduction of these educational practices are effective learning materials developed from task analytical procedures which are essential to produce documentation of the ongoing instructional progress of each child. The educational content is a written document which is cooperatively planned by the school and the home and revised during implementation. Thus, the modern evaluation of Education for the handicapped involves determining appropriate roles for personnel, standards of performance of those who fulfill the roles, procedures employed by personnel, and materials utilized during instruction — all of which have impact on the measured learning of handicapped children.

Stimulating the Right Hemisphere

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Recent research involving the structure and functions of the human brain provides interesting justification for movement therapy as a part of the remediation prescription. Movement theorists have been in agreement about the appropriateness of activities that include opportunity for development in balance, laterality, spatial orientation, body awareness, and other aspects of the typical perceptual-motor program. Even the most outspoken of critics to prescription of the balance beam, angels in the snow, log rolling, creeping and crawling, and other standard procedures, accept the observations of practitioners who report change in academic achievement coincidental with the directed movement experiences. The controversy is not centered on the question of movement contribution, but rather on seeking answers to why and how it contributes.

There are logical explanations for the improvements that seem to transfer from one modality to another. Most apparent is the potential for attitudinal transfer from playground successes to renewed efforts in the classroom. There is evidence that as a child learns to concentrate on the movement task, he is able to apply that same intensity to intellectual tasks. There is a lesson to be learned from repeated failures before ultimate success. With experience, the youngster becomes more skilled in performing under the watchful eyes of teacher and peers, regardless of playground or classroom environment. Motivation is born out of the

attention and concern expressed for the individual, and any child who senses this will improve.

On the other hand, there are those who announce that change comes as a consequence of growth and measureable adaptation within the organism itself. Clinical reports of ongoing structural modification within the brain emerge. While the research directed specifically toward associating neurological change with movement experiences is severely limited, there is a growing body of objective research that can provide logical insight to many of the "empirical truths" that we observe repeatedly in play settings. We theorize and apply, according to our own intuition.

Some scientists may be very critical of the empirical approach to perceptual motor prescription, but the enlightened researcher who seeks answers to complex questions that relate to functional relationships between movement and intellect recognizes that all bases for understanding had beginnings in a world of ignorance. At this point, it appears that concrete relationships between mind and body can only be alluded to, but more and more definitive answers are becoming available to us. One important source is the findings and subsequent theorizing of the brain scientists who are studying the specificity of hemispheric contribution.

It has been well documented that the left half of the brain houses those thought centers that relate to academic problem solving. Collectively, the structures on this side focus on the verbal symbolism that represents the majority of the concerns of the educational system. Language, science, mathematics, history, and English are obviously speech center oriented and even other school subjects are generally taught in a manner that is highly dependent on the functions of the left hemisphere.

However, the findings of the split-brain scientists indicate that the right hemisphere makes important contribution to the human cognitive processes. It apparently encodes information differently than its mate, but it is quite obvious that, depending on the nature of the task, the right side may in fact be dominant. This superiority relates to a general ability termed spatial orientation, and incorporates the coding of stimuli in a manner that can logically be described as "thinking with pictures" rather than words.

The research indicates that there are diverse approaches to receiving, processing, and responding to specific stimuli. Some individuals are

highly dependent on visual cues for learning; others rely heavily on verbal cues. The majority use both modalities to varying degrees, but some are deprived in one or both. Indeed, it is possible that man can be explicitly specialized in his method of knowing. Superiority in the verbal area does not ensure superiority in dealing with visual processing, and the reverse may also hold true. Obviously, the more we understand about the various cognition systems, the more clearly we can identify the components of intelligence and best apply that knowledge in education.

It is the function of the right hemisphere that is of primary interest to remedial educators and particularly the perceptual-motor practitioners. Classification as an educationally handicapped student is merely a description of left hemispheric deficiency. There are two approaches to the problem of enrichment: (1) create a greater diversity in curricula, methods, values, and goals that will allow each student to benefit according to individualized make-up, and (2) adapt teaching methodology that will utilize right brain approach to support left brain concepts. This latter proposal has been effectively described in the literature by Cratty in his recommendations for use of floor grids that portray either geometric figures, numbers, or letters, wherein the student solves problems by moving from one square to another. Humphrey has developed an extensive collection of body-oriented teaching aids that now find clinical support in the reports of the split brain scientists.

The most productive intellectual processing involves cooperating interaction between both hemispheres. Contribution comes from either side according to the subject matter. Current educational trends suggest importance to language facilitation at the expense of spatial orientation. The fallacy of this attitude is complicated by the evidence that even brain cells tend to atrophy with lack of stimulation. The admonition of the fitness enthusiast to "use it or lose it" seems to have application to either side of the brain. The spatial implications of movement emphasizes a diversified potential. Physical education has been given new and broader emphasis through the findings of the split brain investigations. Many answers will come from the scientific environment of medical doctors and hospitals, but knowledgeable educators with a variety of talents may make valuable contributions to the care and training of our exceptional friends, present and future.

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How to Change the Games Children Play

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The structure and design of a game dictates the outcome behavior exhibited by the participants. Every movement game we play can be modified, altered or adapted to fit the developmental needs of our students. Games are often used as a means to assist children with specific development in motor, emotional and social domains. Without analyzing the game, teachers sometimes think that the existing game form meets the desired criteria they have established for the game outcome.

To assist teachers and students, a model has been established that enables us to ana'yze and then design games that begin to meet children's needs. The model, known as games analysis, will provide everyone with strategies that enable inclusion of all students within a single game form. Once the model has been shared with you and once you begin to feel comfortable with changing games, a new world will open itself to you. If we truly believe that all children should benefit from educational experiences then it is imperative that we teachers design all of our educational activities to include rather than exclude children.

The following chart represents the games analysis model. Included in the chart are the identification of game categories and components.

It is possible using strategies presented in workshop sessions to manipulate game components for the express purpose of changing and/or designing games that fit the expressed needs of participants.

The games analysis model can be used for a multitude of other purposes. Problem solving activities and refined social interaction

situations can be developed within a games lesson through use of the model.

In order to implement this process of games analysis, additional strategies need to be shared. During our time together several of these strategies will be presented. As one modifies games, a shift in decision making begins to occur between teacher and student. Decision making is

TABLE 2-1
GAMES ANALYSIS MODEL-CATEGORIES AND COMPONENTS

Players	Equipment	Movement Pattern	Organizational Pattern	Limitations	Purpose
individual	balls	running	random placement	3 outs/inning	to win
2/team	bats	jumping	circle	10 yds for 1st down	to promote cooperative behavior
3/team	sticks	hopping	columns	boundaries on field	help develop locomotor skills
4/team	gloves	skipping	double circles	5 min./quarter	promotes problem-solving behavior
5/team	hoops	walking	files	tag below waist	aids in eye-hand coordination
six on one team, four on another	plastic bottles	galloping	double columns	only 5 players per team	helps develop self concept
even no. on one team, odd number on other	ropes	kicking	staggered file	4 downs to makes a T.D.	develop competitive spirit
???	bases	throwing	even/odd file	must dribble the ball for every step taken	promotes sportsmanship
	wands	catching	diamond		develop cardio-vascular fitness
	bowling pins	twisting	triangle	???	
	individual body parts	rolling	square		
	???	???	???		

a learned skill and its implications for game forms will be shared with you. If one wants students to become independent decision makers then we must afford students the opportunity to make decisions. Our special populations are often placed in environments that mandate responsible decision making. If these people are to become successful it is incumbent upon us to share with them a variety of educational settings that allow them to engage in this process.

Finally games can be fun and educational at the same time. Too often games, by design, exclude children from active and meaningful participation. Games analysis allows a teacher to include all children within a single game structure. By using some simple procedures it is possible to design games that account for the various physical and cognitive abilities that your children exhibit. To suggest that games analysis is a process implies that it takes time to understand the subtle concepts and it takes time to implement. Games analysis will be introduced to the teacher and then you can decide if you want to know more about it.

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Exploring Movement Patterns Through T'ai-Chi Chu'an

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One day, while walking through a verdant forest in ancient China, a Taoist monk witnessed a common struggle. A large bird was attempting to prey upon a common forest snake. At each attempt the bird made to grasp the snake with its talons while still in flight. The snake would avoid capture by slowly rotating its head and upper body in an erect circle. These numerous near misses frustrated the bird so much that each pass came lower and closer to the snake. It was during one such frenzied pass that the snake easily sunk its fangs into the bird. The bird authored its own demise.

So impressed was the monk, Chang Sen-Feng, that he returned to his temple home and designed an exercise and self-defense system to be known as T'ai-Chi Chu'an.

T'ai-Chi was originally developed to promote exercise for the meditative monks within their cloistered walls, but it was also used as a self defense system against highwaymen when the monks travelled.

T'ai-Chi incorporates a controlled range of motion including circles, spirals, parabolas, and shifting weight distribution. Within these movements the student must distinguish laterality, directionality, space and space/time relationships, balancing, manual dexterity, and various degrees of pathway perception. The practice of T'ai-Chi Chu'an can stimulate deep breathing, increased circulation, muscle strengthening, improved range of motion, reduction in nervous tension, and flexibility

38

conditioning. To augment the T'ai-Chi Chu'an solo exercise, various forms of the martial arts are incorporated including defense against rape and molestation, philosophy, and use of the Jo (stick). The martial arts exercises were included to build self confidence, develop ballistic coordination, re-enforce body parts identification, and proper movement sequencing. They were included for *only* those purposes — none other. Each student is told of the importance of keeping the practice of T'ai-Chi Cha'un and its related exercises within the confines of the Remedial Physical Education class.

All movements in the T'ai-Chi system have been broken down into sequential learning steps with a measurable criterion for each step. Within these breakdowns the criteria were sorted into either a fine, gross, or sensori-motor area. These were further arranged from least to most difficult skills using the Los Angeles County Superintendent of Schools' CARE project, Psychomotor Curriculum as a guide. Examples of such arrangement were numbered for computer control for purposes of documentation and individual record keeping (see Chart A).

The students were introduced to T'ai-Chi Chu'an by story illustration and narration of the bird and snake conflict. During the introductory session, the students were cautioned to keep their practice and use of T'ai-Chi and its related exercises within the classtime. After four years and 140 students from various special education classifications, there were no incidences of misuse of any techniques learned. The students were shown the opening techniques and were structured into formal formations for learning. Between two to five techniques were introduced per week with plenty of repetitious practice and supportive exercises which kept the learning environment changing and vibrant.

Practice was used to increase proficiency and to reduce errors in performing T'ai-Chi. The practice was scheduled for the same time period each session which allowed the student some modicum of mental practice before the session began. Some sessions were strictly run on learning a particular movement pattern and were therefore classified as "part practice." Other sessions were scheduled to practice all previously learned movements while incorporating a new movement pattern and were classified as "whole practice." Most sessions were "whole practice" with frequent breaks for rest and questions which further classified the practice schedule as "distributed" rather than "massed" (without rest between practice intervals). Occasionally, parts of some practice sessions were discussions of T'ai-Chi Chu'an philosophy (Taoism) and time was

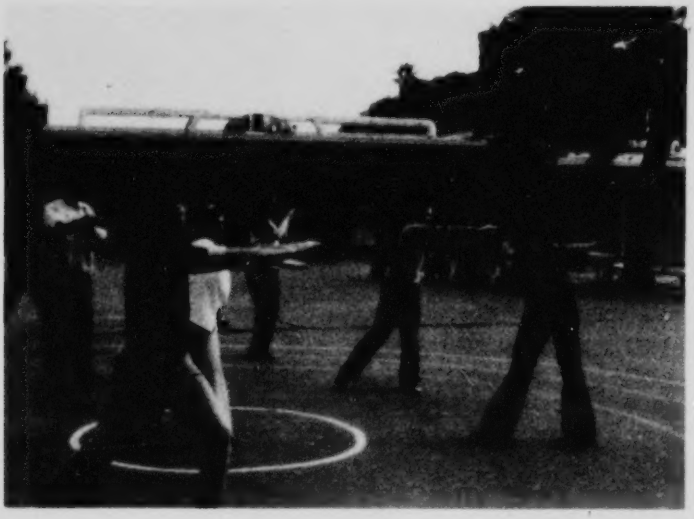
set aside for meditative practice. The outcome of the motor learning techniques used were immediate skill development, success oriented activities, identification of a healthy image, and a challenge which was desirable to meet.

Perhaps most important of all was that T'ai-Chi Chu'an (The Supreme Ultimate Fist) was FUN!

CHART A

IPO†	*Item*	*Behavior*	*Criterion*
10.1.6	Space relationships of in-out, on-off, next to, up-down, forward-backward.	Will follow instructions command to himself, other students, or pieces of equipment.	One correct response from each concept tested.
20.2.7	Hops	Hops on either foot.	Hops on correct foot for movements in T'ai-Chi Chu'an which require a hop, e.g., Gold Cock Stands on One Leg, right.
21.2.1	Strikes at object	Strikes at target with Jo (stick)	Strikes at target with correct form and sequence

†Intermediate Performance Objective



Realistic Approaches to Teacher and Student Motivation

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Motivating oneself to teach is no easy task! To be able to keep motivation at a consistently high level is something that takes considerable insight, planning, and concentrated effort. It is very apparent that the ability to motivate oneself is directly proportional to the ability to motivate others. A teacher's motivation to teach and a student's motivation to learn is closely related because what the teacher does affects the student and what the student does affects the teacher. It is of utmost importance that all teachers understand, and then put into practice, the underlying dynamics of their own self motivation in order that they can be effectively motivated teachers.

"People may doubt what you say
but they will believe what you do."

Teacher Motivation

The most important aspect of teacher motivation to teach is self-awareness. The ability to allow themselves to be what and who they are and then to allow their students and colleagues to see and know them as they are is so vital in the student and teacher personal interaction.

"Know thyself for this is the greatest virture."
— Socrates

42

An integral part of self awareness is the realization that one is motivated by many different things. Knowing that that which motivates one person does not necessarily motivate another person is so important as one seeks to identify those things that will motivate them. Every teacher must, from the very beginning, continue to determine in what ways they will be reinforced for doing a good job of teaching.

"The best way to better your lot is to do a lot better."

Another important part of a teacher's motivational approach is that they must constantly be aware of the feelings and attitudes of those individuals with whom they work. Teachers must develop the ability to identify the needs and feelings of administrators, other teachers, as well as those of their students. It is imperative that everyone recognize that the feelings expressed by people, whether they are good or not so good, are genuine and real feelings.

"The ability to see the good in others
and the not so good in ourselves is perfect vision."

The three most common causes of teachers losing their motivation to teach are: 1) inability to establish appropriate and effective student and class control; 2) difficulty in identifying what will motivate the students to take an active part in the class and to learn; 3) inability to perceive and then resolve conflicts with other teachers and with administrators.

In order to better comprehend and understand how and why teachers become unmotivated, Earl V. Pullias and James D. Young in their text, "A Teacher is Many Things," list the following ten subtle and frequently deadly enemies to optimum teacher growth and motivation:[1]

1. *Cynicism* – Cynical persons are unable to see or to believe in any form of "good" in themselves or others. They look for and as a rule usually find a hidden or ulterior motive behind a belief or an action.

2. *Narrowness* — Each part of a complex whole coming to know and do their small duty better and better with less and less knowledge of or interest in other parts or the whole.

3. *Confusion about role and purpose* — There doesn't seem to be a clear conception in their mind of what education purposes to do, what the process is essentially, or what significant part they are to play. They get caught up in the web of daily, immediate demands and they never have asked, or may have long since ceased asking, what they are really attempting to do and why.

4. *Distorted conception of the nature of people* — Sculptors work with clay and stone, carpenters with wood, poets with words and meter, and teachers with human beings. Teachers, like others, are full of preconceptions about the nature and potential of people (ethnic groups, mentally retarded, physically handicapped).

5. *Clutter and crowdedness* — There appears to be a need to do more, see more, learn more, get more, until more becomes an obsession. What knowledge is worth knowing? What really are the use and meaning of this personal and professional crowdedness and clutter? Is it really necessary to be so rushed that almost nothing is done with grace and style?

6. *Pedantry* — Knowledge and understanding are condensed into language which in essence is a network of symbols. With time the distance between the experience and the symbols or abstractions increases until eventually the abstraction has little or no meaning to the learner.

7. *Dullness or failure of imagination* — Dull, dreadful, every day the same, no life or new ideas, no special things going on. Sameness is easy and in a way inviting but tends to produce a stifling dullness.

8. *Routine* — A major portion of life is composed of hard recurring relatively dull routine. There is the recurring, back-breaking, daily, weekly, yearly routine and there is also the deeply satisfying, even exhilarating, guidance of learning. One must have a fine perspective in order to keep these aspects of life in proper relation.

9. *Face unsuited to temperament* — Work is a constant strain which tends to undermine joy and zest in work and eventually destroys the teacher. A failure on the part of the teacher to develop a style that is suited to both temperament and to work becomes a serious obstacle to relaxed growth toward excellence.

10. *Fatigue and illness* — Sickness rapidly undermines all of the desireable processes. Every personality has a breaking point. We need to learn the limits of our own personality. We need to practice regular and systematic withdrawal and renewal. We need to develop a few mental and spiritual intimates.

Once the outward behavior of teaching colleagues is recognized it is then necessary to understand what their true feelings are and then proceed to identify and deal with the underlying dynamics of their personality and behavior. It is a known fact that in order to improve any relationship it behooves the initiator to identify something that is good

about that person and then sincerely communicate it to them. The process of building a positive and strong relationship is not always easy, but if an individual is sincere, honest, open, and persistent they will begin to see growth in that relationship.

"You can see some good in everyone
you try to see some good in."

Teachers are stimulated to extraordinary teaching performances because: 1) they are continually motivated when they see, within their students, the results of their teaching efforts (accomplishments); 2) they *seek* and then receive positive reinforcement from the people with whom they work and associate (recognition); 3) they are capable of effectively developing intrinsic rewards, for their teaching efforts, which gives them the desired satisfaction (self actualization).

All teachers must organize, in their own way, their approach to motivating themselves to teach. Adapted physical education teachers can motivate themselves by:

Being enthusiastic.
Being a good listener.
Being an active participant in class.
Taking pride in their physical, mental and emotional health.
Developing confidence in their skills and abilities.
Setting reasonable and attainable teaching goals.
Sharing ideas with colleagues and resource people.
Sharing expectations with their class.
Creating new activities with student assistance.
Identifying the needs and interests of their students.
Experimenting with different ways to do things.
Looking for and noticing even the smallest achievements of their students.
Being inquisitive.
Applying academic concepts in physical education.
Identifying and using successful class management techniques.
Gathering and improving their utilization of positive reinforcement techniques.
Accepting the challenge of helping and guiding the low ability student.
Taking pride in providing successive successes for each student.
Focusing class discussions on positive aspects of the lesson, game, etc.

Utilizing feedback from student(s) more effectively.
Being a promoter of joy and laughter.
Smiling, because it's contagious.

"The way to gain a good reputation
is to endeavor to be what you desire to appear."

Student Motivation

In order to motivate students to learn the teacher must help to increase their interest, desire, or their need to learn. Students should be provided a warm, friendly and controlled environment, and should desire to seek attainable and attractive goals. The teacher should give the necessary guidance and direction to the students so that they can identify what they want to learn, how they plan to learn it, and then be able to determine how much of it they were successfully able to learn. It must be remembered that for students to learn anything it is necessary for them to *internalize and organize it in their own way and in their own brain.* The final determination of whether the student has successfully learned what they wanted to learn is to observe: Can they do it well? Are they pleased with their effort? Do they feel they accomplished what they wanted to accomplish?

"When you know all of the answers
you haven't asked all of the questions."

Motivating students to learn, like teacher self motivation, is no easy task! Each student's feelings and thoughts must be respected and the teacher must provide them with the opportunity to develop their own insight into their active participation in the learning process. Teachers can help motivate their students in adapted physical education by: 1) improvising or adjusting the equipment, supplies or play area; 2) providing activities which are developmentally appropriate; 3) helping students to set reasonable and attainable goals; 4) assisting students to organize and sequence motor skills and movements; 5) helping the students in their attempts to develop a positive self image; 6) providing skill development applicable to their social and recreational interests; 7) providing a program which is fun and enjoyable.

"Learners teach themselves."

It must be remembered that certain approaches and techniques, which are used in physical education, do not motivate some students to want to

take an active part in the program. Some students become unmotivated if: 1) all games are combative and aggressively oriented; 2) the competition is directed at the students rather than at the game; 3) the students are told to "just try harder"; 4) favoritism is *not* shown to all students; 5) the students have to sit and wait; 6) physical activity is used as punishment; 7) the students are pressured into doing something they do not want to do; 8) teachers allow students to ridicule, deride, mock and taunt other students or call them names, i.e. spastic, ortho, retard, etc.; 9) the students only get to play team games and not individual or dual activities.

"Students can because they think they can."

All motivational approaches warrant considerable study and planning in order to provide all students with the appropriate assistance to motivate themselves. The following principles of learning, if applied, will help motivate students to get involved and to learn:[2] 1) The more meaningful the task, in the mind of the student, the easier it is for them to learn and the less time and practice it takes. 2) Immediate assistance and guidance, given to the student, increases the rate and degree of learning. 3) The whole-par-whole method of teaching and learning usually produces desired results quicker. 4) The more precise the feedback the greater the desire to improve the performance. 5) Overlearning for retention. Practice the skill or movement properly two or three times. Move on once it has been learned.

Regarding the development of self and student motivation a teacher should behave like a duck — "keep calm and unruffled on the surface but paddle(work) like the devil underneath at all times."

"Success comes before work in only one place:
the Dictionary."

Notes

1. *A Teacher is Many Things*, Earl V. Pullias and James D. Young, Indiana University Press, Bloomington, Ind. 1969.

2. Theory Into Practice Series, Madeline Hunter, Ed.D., TIP Publications, P.O. Box 514, El Segundo, CA 90245.

Go For It — Going Beyond the Limits

Tim Hansel, Executive Director, Summit Expedition; Dave Willis, Sierra Treks; Joyce Shadburn, Coordinator; Tim Gaffney, Summit Expedition, Azusa Pacific College

For the past two summers, Summit Expedition has conducted a special seven day mountain wilderness seminar especially designed and modified to the abilities of the physically inconvenienced. With a staff of trained mountaineers (one instructor to two students ratio) and the assistance of able bodied participants on a one-to-one basis, the week includes such experiences as rock climbing, rappelling, backpacking, cross-country travel, a solo experience, swimming in mountain lakes, confidence building exercises and dialogue designed to prove, as one of our participants said so well, that "can't is a four letter word."

Dave Willis, who lost his hands and feet to severe frostbite several years ago on a Mt. McKinley expedition, and who was a prime motivator for the GO FOR IT program, wrote of the origin of the phrase in a newsletter:

> Somehow Tré had just finished her second roped climb and descent of the day. I was giving her the standard line just to satirize its absurdity, "I'm sorry Tré, but you're handicapped — you *can't* rockclimb. You are missing a leg, are unable to use the other, and must get around in a wheelchair. You *can't* climb, you're handicapped. Handicapped people *can't* come to the wilderness. They *can't* do anything outdoors unless there are paved trails and handrails and . . ." Tiring of my humor, Tré cut me off sharply,

putting an end to my ridiculous diatribe, she exclaimed, "Hey, don't you know that *can't* is a four letter word?!"

I did know — a little — and learned more on each of the six unbecredible days spent on GO FOR IT, a ridiculously wonderful wilderness experience in the Sierra Nevada mountains of California designed for and by people with physical limitations — generally referred to as "handicapped."

It All Began When . . .

Once upon some times in the past few years, two directors of Christian wilderness programs spent some involuntary months in a hospital. While there, they made the startling observation that they were not the only people in the world who were physically prevented from receiving the good gifts God bestows on those who visit the mountain wilderness. Emerging from their medical vacations in various states of physical disarray, Tim Hansel (Summit Expedition) and Dave Willis (Sierra Treks) decided to put together a challenging program of wilderness activities modified to the abilities of physically handicapped participants.

They started researching organizations offering challenging outdoor wilderness experiences. Only one group was presently running trips, another was planning to start soon. None were talking about the hope afforded by a God who handicapped Himself for our sake.

Were they dreaming? A hazy winter-spring blur of meetings, phone calls, appeals for funding, generous response to appeals, and recruiting, caused the dream to awaken — but not only for Hansel and Willis.

Who Did What?

Matt Roloff is sixteen, stands four feet, weighs 85 pounds, and can do 30 pull-ups. Due to problems with his legs, he must use crutches or a wheelchair to get around. His friends had been going off to the mountains to backpack, but Matt "couldn't" go. On GO FOR IT he became "DynaMatt."

Joyce Shadburn is in a pre-physical therapy program at Long Beach State. As an "able-bodied" participant, she was determined to be involved with "handicapped" people in a more natural, human setting than what is often clinically available.

Cheryl Marie Walker will not take "no" for an answer. Pronounced dead a few years back, she obstinately revived to be told by the doctors that she wouldn't walk. Naturally stubborn, she again gave them a

negative response. Her nickname is "Runner" even though much of her right side still suffers from paralysis.

Though born without hands, Mark Speckman managed to become an All American small college linebacker. His greatest frustration was being called for "holding." His insights, enthusiasm and drive to make GO FOR IT a reality had been valuable since the beginning planning stages.

There are others who participated enthusiastically and tenaciously in this first dream. They were sightless, handless, footless — but none were gutless or heartless.

Each Day a Challenge

After being issued backpacks, sleeping bags, and other wilderness paraphernalia at the Summit Expedition base camp south of Yosemite National Park, it was a bumpy 45 minute ride to Bowler Creek and what all thirteen of us had come for. Picking our way up Bowler Creek on foot, crutches, and human-powered wheels, we learned to make our first campsite — the first of many things we would learn — like rockclimbing.

Standing at the bottom of the 50 foot rock wall on the morning of Day 2, everybody suddenly realized what they had gotten themselves into. A positive group spirit of support and encouragement, combined with a genuine GO FOR IT effort on everyone's part, turned our hesitation into exhilaration. A blind man learned to tie knots from someone who had no fingers. Crutches and wheelchairs were left below and exchanged for the support of granite cracks, nubbins and friction holds. Some of the "able-bodied" had a more difficult time than the "handicapped." (Remember DynaMatt can do 30 pull-ups; can you?) The Summit Expedition climbing staff (safely and competently manning the safety ropes we were tied to) were amazed at the positive spirit that existed relative to their "more capable" groups of the past.

Positive Spirit Continued

That spirit continued on Day 3 as we backpacked to Jackass Lake — 3 miles and 1800 feet uphill. Many of the more physically able members literally bore the burdens of others. We encouraged each other with boisterous cheering. But often — when exhausted or in pain — the best encouragement was having someone right there quietly beside with "I'm with you" written all over their face.

A lot of us had never been swimming in a mountain wilderness lake before Day 4, and after getting clean, we were glad for the restfulness of

solo. We each got our own private spot around the lake at which to spend the afternoon and sleep overnight by ourselves. Being alone was a good opportunity to think about the Bible studies and discussions we'd been having. We also had to take time to think about the direction of our lives.

What Is Success?

One night we had discussed what phony definitions of success and failure the world gives us. In our studies about Job, Joseph, and Paul, we'd learned that though we can't always understand our suffering, God can overcome it and use us through it. We also learned that it is not enough to just be a victim of suffering — God calls us to voluntarily suffer *for others* as Christ suffered for us.

We were glad to see each other after solo on Day 5, but sorry to head downhill because that meant we had to think about the trip being over. That night around the campfire back at Bowler Creek, we stayed up until 2:00 a.m. It would be hard to explain what we did, but when we finally went to bed, we realized what special people each of us were and the good things that God had been doing, and desired to continue in each of our lives.

The last morning we had communion, and then the van came to abruptly end an experience that would continue on for each one of us. In an unspoken way we left each other with the wish that Tré had given each of us before solo, "Let Jesus hug you!" Then we said goodbye to each other and headed home, still a little dizzy from the week, and convinced that no one would believe us.

"I asked God for strength, that I might achieve;
I was made weak, that I might learn humbly to obey . . .
I asked for health, that I might do greater things;
I was given infirmity, that I might do better things . . .
I asked for riches, that I might be happy;
I was given poverty, that I might be wise . . .
I asked for power, that I might have the praise of men;
I was given weakness, that I might feel the need of God . . .
I asked for all things, that I might enjoy life;
I was given life, that I might enjoy all things . . .
I got nothing that I asked for, but everything I had hoped for
Almost despite myself, my unspoken prayers were answered.
I am, among all men, most richly blessed."

THE 1977 GO FOR IT! EXPEDITION

This summer seventeen people participated in GO FOR IT. The purpose of our seminar today will be (1) to share and describe the program through a slide presentation and narrative, (2) to explore the impact and ramifications of such a program on the participants by focusing on such things as: attitude changes brought about by accomplishing difficult tasks; confidence to meet unknown challenges and obstacles; skill development and its influence on self-image; the importance of establishing non-neutral learning environments; redefining success and failure; learning how to assume responsibility for one's own actions; re-defining the term "handicapped"; (3) to look again at the particular needs of the physically inconvenienced, and how we can begin to meet those needs, (4) to dialogue regarding ways of translating some of these concepts into existing programs, and (5) to discuss other programs such as this which might be developed.

The Movement Mystic

Dr. James L. Ballinger, Director, Perceptual Motor Laboratory, University of Missouri

Presented will be a discussion of the neuro-physiological bases stressed thru MOVEMENT and their implications in reference to making the organism more available to academic processes.

The instrument of change .....Movement
Entry .....Play
Methodology .....Problem Solving
Closure .....Flip-Flop Theory

Educators in the field of physical education have for a long time taught various types of motor activities, giving attention to the contribution of these activities to general health status, physical fitness, the social adjustment of the individual, and the provision of leisure time activities, etc. Little attention, however, has been placed on the importance of these motor activities in the development of the learning process itself.

Little attention has been given to the Caloric test and other similar reflex assessments, to the development of the vestibular organs, to the release given to the oculo-motor pathways, and to the role of the Corpus-Collosum in making an asymmetrical response on a bi-lateral nervous system. It is time to examine their respective roles.

In this society the primary responsibility of the child is that of learning. Our society frees the child for this enormous learning task, and to a large extent, relieves him of any other responsibilities. Thus, the child is presented in his childhood days with situations which will permit him to interact with the environment in such a way that the necessary skills, knowledge and attitudes can be acquired for living in our complex society.

The motor activities which contribute to the child's exploration of his environment may be of the greatest significance for education since the young child gains his information about his environment through exploration — this exploration involves movement through space and the manipulation of objects. These are dependent upon motor (movement) activities and the ability to control motor responses. The generalized movement patterns have been divided by Kephart into four categories: 1) balance and posture in which the force of *gravity* is the zero point for all spatial relations; 2) locomotion involving the *exploration* of space; 3) contact patterns which are concerned with the exploration and *manipulation* of objects; and 4) *receipt and propulsion involving the exploration of objects in space.*

The child through balance and posture activities is able to become spatially oriented to discern up from down, right from left, front from behind, change weight relationships around the center of gravity and to maintain gravity orientation while the body or parts of the body are moving; the child who has difficulty with this orientation can also be expected to have difficulty with locomotion.

Our program is based on the following concepts: 1) movement is basic to biological growth; 2) play is innate in the human organism; 3) stimulation is essential to the development of associative tissue in the child's mind-directed movement; 4) realistic perception is based on sensory stimuli modification by movement performance; 5) school readiness can be improved or hindered by perceptual-motor learning or deficiency; 6) the child's orientation to his world is revealed in his overt actions. — READING the body can be learned.

Thus we establish a purpose for movement given in a purposeful manner. Using improvised equipment and activities developed so that the program can be taught in any area in which a class can meet, we develop a perceptual-motor physical education curriculum that any teacher, teacher's aide or parent can administer. It must be the total program or movement to an associated command; each unit making its contribution but making little contribution by itself.

By manipulation of the environment we hope to stimulate neurological organization within each child.

Due to the fact that much of our professional attention has been directed toward how the handicapped child reacts to space, I will direct more of my discussion toward the time element and to relaxation considered in the context of the handicapped child.

Time and the Handicapped Child

The universe manifests itself as time, space and motion. Time is the manifestation of man's conscious awareness of the rhythmic operation of the universe and rhythmic-cognitive time is expressed as a flow of thought. Man learns to recognize and discriminate between rhythm and disrhythm. The discrimination between rhythm and disrhythm gives man a "time sense" (White, 1940). Having a time sense or being able to discriminate rhythm is vital to man's perceptual motor functioning both cognitively and behaviorally (Barsch, 1968).

Time can be divided into three components. These are synchrony, rhythm and sequencing. Synchrony is the point of origin at which the response to a stimulus begins. Rhythm is a time scale characterized by equal, stable units. Sequencing is the ordering of motor events. These three concepts are interrelated and combine to produce a "time sense."

The content of time is psychological rhythm or the rhythm of perceptual-motor behavior. Sidereal time is the rhythm of the universe. Man cannot change sidereal time as measured by clocks and calendars but he can partially control psychological time. It seems reasonable to assume, therefore, that man can be trained to consciously discriminate rhythmic time and thereby develop a synchronicity with the rhythm of the universe (White, 1940).

The rhythm of life is the basis of our experience with time. Most time concepts depend upon what the individual has learned through the verbal expression of the timing of events.

Until these concepts are learned, time is an illusion. Because much of the behavior of people is dependent on society's concept of time, some individuals spend a lifetime of discomfort and inefficiency because they are disrhythmic and have an inadequately developed "time sense." To build a "time sense," which will synchronize with what is expected of most individuals, a certain amount of tension must be built into the individual through reinforcement which will produce a need to complete a task (Hull, 1943).

Physiologic time is a person's own individual time sense and defines the various rates of time or rhythms occurring within the individual's system. The human organism receives rhythm as a biological grant. Circulatory, respiratory, digestive, and neurologic patterns of rhythm are built into the design of the developing fetus. Physiologic time rates or rhythms are generally stable but vary under certain conditions such as

stress, threat, fear, etc. (Barsch, 1968). Locking the body into a particular time rate or rhythm is a formidable task (Barsch, 1971). The disturbance of one rhythmic rate in the body such as an irregular heart beat or a disrhythmic gait can cause other rhythmic rates to vary to the detriment of the individual. Any disturbance to internal body rhythm manifests itself in the visible behavior of the individual (Barsch, 1971).

As an individual moves, he spans time. Each move leads to a future time. Each stimulus is separated from each response by a span of time which depends upon a previous action. A link in the chain of action can be recalled or eliminated through the use of memory. People mentally search for learned responses. Because it is possible to mentally search for learned responses, it becomes possible to discriminate between appropriate and inappropriate responses in terms of rhythmic perceptual motor movement.

The synthesizing process which can occur in rhythmic-cognitive time is important to learning appropriate responses to particular stimuli. Building a chain for perceptual motor responses is a matter of forging the links (Travers, 1972). Furthermore, it seems to me that a person can expect to achieve certain results through rhythmic-cognitive activities. The first step in this process is that of helping the individual become an active listener. The development of rhythmic-cognitive time is a part of the listening and learning process.

The individual must develop a competent listening and observing learning process system which can move either forward or backward through memory in cognitive time so that rhythmic cognitive awareness is developed. The individual develops links in proper sequence to produce a chain which has been refined so that appropriate responses occur to particular stimuli (Travers, 1972). Performance efficiency can be sustained only if rhythmic-cognitive time is not locked into and imprinted on the individual's neurological system, then accurate perceptual motor movement cannot be sustained. Responses must become tied to appropriate stimuli and wrong habits from past experience eliminated (Travers, 1972).

Results of Disrhythmic-Cognitive Processes

Once the motor pattern is fixed in the proprioceptors, it is assigned to automatic status and appears as requested without conscious attention to mechanics. The maintenance of body balance and the expression of rhythmic patterns are fundamental to readiness for more advanced

perceptual motor experiences. The poorly coordinated or disrhythmic performer must devote a disproportionate amount of attention to the mechanics of movement thereby giving up the freedom to cognitively explore. To insure cognitive freedom, the mechanics of movement must be relegated to "ground" status so that cognitive freedom can become the "figure." The problem of "how" to move is sometimes set so forcibly into the foreground that "why", "when" and "where" are forced into the background.

The purpose of rhythmic exercises is to produce a sensory-motor integration which will generate a higher degree of comfort to the individual in his spatial explorations. The person needs to be able to accurately discriminate (a) near space, the space within which a person can reach out and touch objects, before he can effectively discriminate; (b) mid space, the space just beyond his reach, and from which he can move to retrieve objects; and (c) far space, which he can see but cannot touch or retrieve, such as the horizon or the stars. At the end of an autonomic pacing rhythmic program, the individual is able to execute both fine and gross motor skills in a rhythmic sequence which will increase (a) his self awareness, (b) his self esteem, (c) his skills in games, and (d) indirectly his efficiency in academic areas.

Teaching Perceptual Motor Skills

The teacher only has control over what he tells the student to think about and little control over how the task is thought about. The instructions in perceptual motor movement include sub-vocal verbalization and visual imagery. The student moves in a step by step order and develops his own skill (Travers, 1972).

Mental practice (Ten Brink, 1976) triggers minute movement of the appropriate muscles when the student visualizes the moves he must make to complete a motor movement. However, whether mental practice is effective or not depends upon the nature of the skill and the extent to which a high level cognitive process is involved (Travers, 1972). The muscle action of the student, determined by perceptual tests such as the Purdue Perceptual Motor Survey, should be compared to the potential of the student for the particular movement while the student is in a state of normal relaxation. Relaxation is a neuro-muscular accomplishment that results in the reduction of tension in the skeletal musculature (Barsch, 1968). The teacher should experiment with

different time durations to see if there is an optimal motor practice time for each particular student (Cratty, 1969).

Relaxation and the Handicapped Child

As the child with learning disorders learns to differentiate he tends to fall into two general types on the basis of his overall movement behavior. First there is the hyper-kinetic child who seems to be put together with a series of springs. His movements are explosive, rapid fire, and extremely tense. He looks as though, to make the simplest movement, he must tense all the muscles in his body to the maximum. If he moves an arm, you can see tension directly in the shoulders, trunk, and even the legs and feet.

The second type of child is the opposite. He is hypokinetic. Overall muscle tonus is low at all times. He slumps down and lops around. He has sometimes been called the "limp rag syndrome." His posture is limp and lacks tonus. If he moves an arm, only a mere minimum of muscle tension is developed. He appears to put forth only as much effort as absolutely necessary to produce overt movement. General tonus, even in the moving arm, is extremely low at all times.

Kinesthetic stimulation is the sensation arising from the muscles and joints which tells the child the position of his limbs and changes in those positions which accompany his movements. The intensity of this kinesthetic stimulation is proportional to the intensity of the movement and the level of innervation of the muscles involved. Where muscle tension is high, kinesthetic information is high. Where muscle tension is low, kinesthetic information is limited. It is through this kinesthetic stimulation that the child becomes aware of his movements and of the position of the parts of his body.

In both the hyper and hypokinetic child, one can hypothesize a failure to develop a kinesthetic figure-ground relationship. The well-known visual figure-ground is possible because of a recognition of contrast between the area of the figure and the area of the ground. The figure stands out in contrast to the ground. It can be considered that somewhat the same function occurs in the kinesthetic field. The pattern of muscles required to perform a given movement stands out over the pattern of the remaining musculature. The kinesthetic figure-ground relationship is created.

Such a relationship is recognizable only if the kinesthetic stimulation from the figure movement is sufficiently different from that of the

ground to permit it to be readily identified. Such a necessary contrast may well be absent in the case of both the hyperkinetic and the hypokinetic child. In the former case, the kinesthetic level of the ground stimulation is so high that, when the figure is activated to it's maximum, it is still little different from the ground. Even though the required movement is as strong as possible, there is not sufficient contrast to permit it to be recognized as different from the ground. It fails to stand out as figure because the level of the ground is too high.

In the case of the hypokinetic child, his level of kinesthetic stimulation is uniformly low. When he moves, the movement is made with an absolute minimum of effort and hence produces a minimum of kinesthetic stimulation. The pattern stimulation from the movement is so limited that it does not rise out of the ground and contrast with it. The figure-ground relationship is not recognizable because the level of the figure is too low.

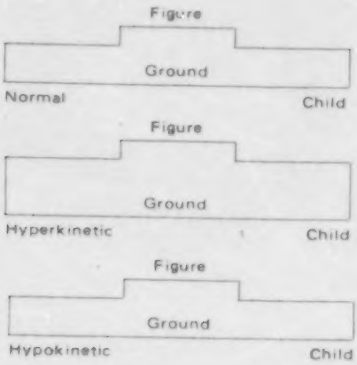
Thus in both the hyperkinetic child and the hypokinetic child, kinesthetic figure-ground is difficult to develop. In such problems as perceptual-motor matching, eye-hand coordination, eye-foot activities, and complex motor coordinations, it would seem important that a kinesthetic figure-ground relationship exist so that the necessary comparisons between perceptual data and response data can be made. Without such a relationship the child cannot use perceptual data to determine a purposeful response but can only relate it to a vague overall movement which cannot be made directly applicable. The child has difficulty sorting out a particular response purposefully related to the perceptual data. Problem solving, either by perceptual information or motor information, becomes difficult.

In the training of children with these movement problems, the initial attack is designed to increase the contrast between the prescribed movement and the remainder of the musculature so that the figure-ground relationship in the movement can develop. In the case of the hypokinetic child, such training is directed toward raising the level of energy in the prescribed movement. Resistance is introduced so that the child is required to expend greater effort to overcome the resistance to the movement. Moving the arm with a weight held in the hand or pushing against the hands of the teacher are methods of introducing such resistance.

In the case of the hyperkinetic child, the training is designed to reduce the level of the background activity. The child is induced to relax as

completely as possible and is aided to reduce the tonus of the overall musculature. A simple movement is then prescribed and the child is helped to produce this movement while remaining relaxed in all muscles not directly involved in the movement.

Level of Kinesthetic Stimulation



Will Perceptual-Motor Training Improve Academic Functioning?

Improvement in school studies is the responsibility of the academic teachers. A reading teacher improves the reading ability of children. A language teacher improves the communication skills of verbally impaired children. A perceptual-motor specialist improves the perceptual-motor ability of children. However, by reviewing the subskills of academic readiness and perceptual-motor proficiency, commonalities between the two will be discerned. Following is tabled the subskills of both reading readiness and also skills emphasized in perceptual-motor training.

Reading Readiness	*Perceptual-Motor*
1. Auditory Discrimination	Body Image
2. Auditory Memory (short-long)	Directionality
3. Attention Span	Laterality
4. Figure-Ground Discrimination	Form Perception
5. Form Perception	Figure-Ground Discrimination
6. Visual Comprehension	Visual/Auditory Memory
7. Vocal Expression	Fine-Motor
8. Association	Balance
9. Space Awareness	Uni-bi-cross Lateral Movements

If a child seems to improve functioning in academic areas, it is probably because the child has learned how to read, write, or compute.

Perceptual-motor training, therefore, prepares a child in readiness skills in order for learning to occur.

This is an eclectic program based on research by: Getman, Sherrington, Hebb, Piaget, Gesell, Kephart, Frostig, Montessori, Doman, Delacato and others.

Individualized-Personalized Strategies and Activities for Complying with Public Law 94-142

Thomas M. Vodola, Ed.D., Director, Research and Evaluation/Project Active, Township of Ocean School District, Oakhurst, New Jersey

Teachers of the handicapped have been extremely frustrated since passage of the Education of All Handicapped Children's Act in 1975. Their frustration stems from the fact that while they have been mandated to *write* and *initiate* an Individualized Educational Plan (I.E.P.) for each handicapped student, they have not been provided with viable, practical suggestions for achieving that goal. Most of the workshops conducted stress the "what" of the task rather than the "how to."

As Director of Project ACTIVE (*A*ll *C*hildren *T*otally *I*n*V*olved *E*xercising), the presenter was faced with a similar dilemma six years ago. (A similar dilemma because ACTIVE was conceived to meet the individualized need of each handicapped individual.[1]) During that time frame the project has successfully field-tested a variety of strategies and activities which are compatible with P.L. 94-142.

And now to the purpose of the presentations. . . . It is the intent of the presenter to provide those in attendance with a variety of strategies and activities which will aid in the writing and implementing of an I.E.P. Attainment of that purpose requires that participants attend both sessions. The sessions and their content shall be as follows.

Session I

Clarification of Terms

Before presenting the strategies/activities which can be used to individualize-personalize instruction, I shall define and explain my interpretation of the term "individualize-personalize instruction and the legislation "P.L. 94-142."

Individualized-personalized (IP) Instruction

"Individualized-personalized instruction" is defined as *instruction which is tailored to meet the needs of the learner.* Most educators would accept that general definition. However, educators do not agree on implementation of the process. A review of the literature indicates "individualized-personalized instruction" has been referred to as: personalized instruction, individualized instruction, ability grouping, team teaching, open schools, ungraded classes, guided discovery, mastery learning, ad infinitum.

The presenter has endeavored to individualize instruction for most of his teaching years. Formerly he viewed the process rather mechanically, that is testing and evaluating pupil performance. As a result of the findings of his doctoral dissertation, he realized that his interpretation was much too narrow. His operational definition focused solely on the teacher's role and functions. It did not include the learner's needs, interests and style of learning. After considerable field-testing via Project ACTIVE, "individualized instruction" was defined as individualized-personalized instruction. Successful implementation of the process requires compliance with the following.

Individualized Aspect

*T*est: Using a variety of instruments and assessment strategies, learner, information is gathered.
*A*ssess: Analyze learner information.
*P*rescribe: Plan a program based on learner strengths and deficiencies.
*E*valuate: Evaluate performance formatively (the "how" of performance) and summatively (the "what" of performance) daily, midyear and end-of-the-year.
(The acronym T.A.P.E. is used to succinctly cover this phase of the process.[2])

Fig. 1 Assessing Eye-hand Coordination

Personalized Aspect

Adopt, adapt or develop tools and strategies which will provide diagnostic information about the learner.

Structure each prescriptive task so that the learner can be successful.

Provide immediate, positive reinforcement to enhance learner self-concept.

Afford opportunities for the reinforcement of strengths via elective experiences.

Afford opportunities for socialization.

Fig. 2 Personalizing Instruction

Maximize student involvement in the learning process. Examples: have students test themselves, or test one another; have students record their own scores (where possible); provide leadership opportunities and responsibilities.

Public Law 94-142

The legislation, "Education for All Handicapped Children's Act" was enacted in 1975. The essence of the legislative bill — all handicapped individuals shall be provided equal educational opportunities and parents shall be involved in every phase of the identification, evaluation and placement process.

Commonalities Between Active's Individualized-Personalized Instructional Program and P.L. 94-142

Legislative Requirements	*ACTIVE's Compliance*
1. Requires a "needs assessment."	1. Provides a variety of testing tools and strategies for identifying student strengths and deficiencies.
2. Requires a written I.E.P. for each handicapped student (as of September, 1977).	2. Trains teachers to prepare and initiate written I.E.P's.
3. Requires evaluation of learner performance annually.	3. Trains teachers to evaluate learner performance on an on-going basis.
4. Requires the learner be placed in the "least restrictive environment."	4. Provides trainees with guidelines for scheduling students according to their educational needs.
5. Requires parents be involved in the identification, evaluation and placement processes.	5. Uses a variety of strategies to involve parents.

Practical Suggestions for Individualizing-Personalizing One's Instructional Program and Complying with P.L. 94-142

Up to this point, the participants in this workshop have been minimally involved in the presentation. You have been provided a theoretical construct for the establishment of an IP instructional program. As per ACTIVE's philosophy (i.e., to maximally involve the learner in the learning process), I shall provide a variety of activities and strategies which will aid you in personalizing your instructional programs. To "tie the package together" meaningfully, each learning experience will be subsumed under the appropriate requirements mandated by P.L. 94-142.

Needs Assessment/Evaluation

The ACTIVE Director has frequently been criticized for over-emphasizing testing. I do not apologize for the emphasis I place on needs assessment — evaluation; rather my rationale for the so-called over-emphasis is based on the following points: no one test should be used to identify learner strengths and deficiencies. A valid "needs assessment" requires the gathering of a variety of information. Tests are viewed as "student learning experiences" rather than as "tests" and as such can be used as motivators.

Sample ACTIVE instruments/strategies which can be used to assess pupil needs and to evaluate their performance are offered for your consideration.

Diagnostic-prescriptive analysis of motor performance: an example. Value: Provides formative information and prescriptive guidelines for conducting an individualized motor ability program.

Fig. 3 Diagnosing Motor Performance

Activity analysis prescription form. Value: Provides guidelines and rationale for programming students with psycho-social problems.

Basic motor pattern checklist: group screening. Provides a simplistic procedure for identifying group needs and evaluating progress.

Diagnostic assignment: developmentally assess the motor performance level of the prekindergarten child. Value: Provides a procedure for identifying the developmental motor level of the learner.

Diagnostic-prescriptive (DP) guidelines for programming motor activities for handicapped children. Value: Provides guidelines for implementing an individualized-personalized program which is based on the developmental needs of the learner.

Diagnostic-prescriptive learning experience. Value: A task analysis assignment which provides the teacher with one alternative to matching prescriptive activities with pupil needs.[3]

Student evaluation form. Value: Provides student feedback relative to the values derived, quality of the existing program and suggested modification.

Session II

Practical Suggestions for Individualizing-Personalizing One's Instructional Program and Complying with P.L. 94-142

Needs Assessment/Evaluation (Continued)

A simplistic procedure for establishing local norms. Value: Enables the teacher to establish local/district norms for any data without use of complicated mathematical formulas.

The behavioral q-sort as a diagnostic tool. Value: Provides the teacher with a practical tool for pinpointing atypical behavior patterns and evaluating progress.

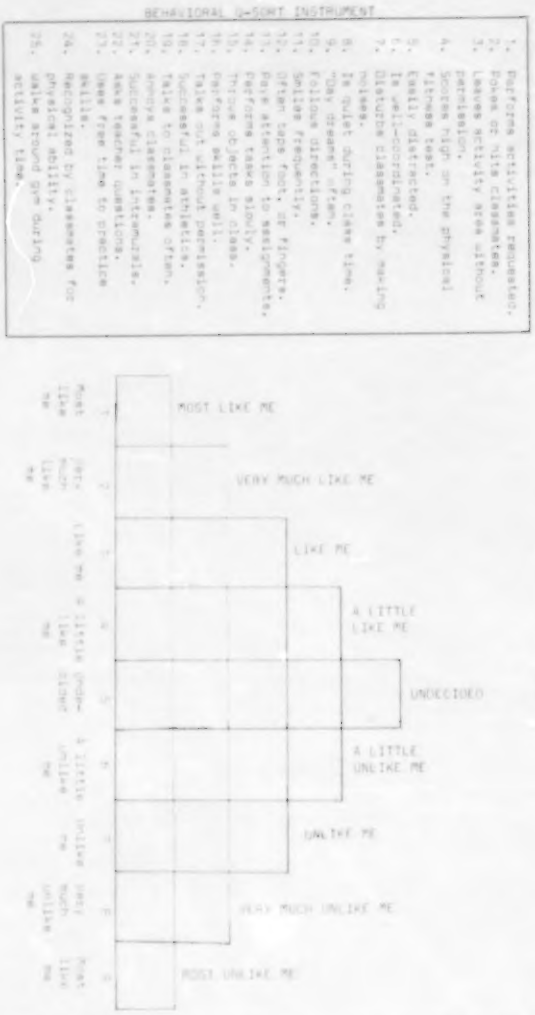
Individual prescription card. Value: Provides a format for students to record their progress.

Written I.E.P.

The service most requested from the ACTIVE Office is guidelines for preparing the written I.E.P. Two suggested approaches are herewith presented.

The written I.E.P.: a format. Value: Provides a format which meets all of the federal requirements.

Fig. 4 Assessing Self-concept


BEHAVIORAL Q-SORT INSTRUMENT
Items on the Behavioral Q-Sort
(Elementary Level)
1. Performs activities requested.
2. Bored or falls asleep.
3. Leaves activity area without permission.
4. Scores high on the physical fitness tests.
5. Easily distracted.
6. Is well-coordinated.
7. Disturbs classmates by moving noises.
8. Is quiet during class time.
9. "Day dreams" often.
10. Follows directions.
11. Seeks friendship.
12. Often taps foot, or fingers.
13. Pays attention to assignments.
14. Performs tasks slowly.
15. Throws objects in class.
16. Performs skills well.
17. Talks out without permission.
18. Successful in athletics.
19. Talks to classmates often.
20. Annoys classmates.
21. Successful in intramurals.
22. Asks teacher questions.
23. Uses free time to practice skills.
24. Recognized by classmates for physical ability.
25. Walks around gym during activity time.
MOST LIKE ME
VERY MUCH LIKE ME
LIKE ME
A LITTLE LIKE ME
UNDECIDED
A LITTLE UNLIKE ME
UNLIKE ME
VERY MUCH UNLIKE ME
MOST UNLIKE ME
Most like me
Very much like me
Like me
A little like me
Undecided
A little unlike me
Unlike me
Very much unlike me
Most unlike me
The Standard

Modified version of "The Behavioral Q-Sort As a Diagnostic Tool, Roger Keith, in Academic Therapy, Vol. 8, No. 3, Spring 1973, pp. 337-340.

The written I.E.P.: two samples. Value: Provide guidelines for preparing an I.E.P. via a sample of one student's plan.

Parental Involvement

Prior to P.L. 94-142, parents were minimally involved in the placement process. The regulations have made it amply clear that parents must be actively involved in identification, evaluation and placement (in that order). School districts are no longer permitted to place a child in a program and, then, advise the parent of the placement. Offered are some suggestions for complying with the legislation and *securing support for your efforts.*

Parental permission form. Value: Provides a procedure for securing parental permission *before* the child is placed in the program.

Fig. 5 Prescriptive Reinforcement Strategy

PRESCRIPTIVE REINFORCEMENT STRATEGY

Prescriptive reinforcement. Value: Includes a strategy for keeping parents updated as to the progress of their children.

Parental report card. Value: Provides a viable means of keeping every parent appraised of their child's progress.

Parental involvement in teacher training. Value: Public relations strategy for eliciting parental support for your program.

Summarization

During the short time allotted, I have endeavored to: define "individualized-personalized instruction"; present the major facets of P.L. 94-142; discuss the commonalities between ACTIVE's "individualized-personalized" program and the legislative requirements; provide some practical strategies and activities which can be used to enhance your existing program.

Notes

1. Project ACTIVE is a physical education program for handicapped individuals which has been validated for national dissemination by the United States Office of Education.

2. The term "TAPE" was coined by Frank Hayden, University of Western Ontario, Canada.

3. The presenter has published a text based on the task analysis concept. The text entitled, *Diagnostic-prescriptive Motor Ability and Physical Fitness Tasks and Activities for the Normal and Atypical Individual*, 1978, is available from VEE, Inc., P.O. Box 2093, Neptune City, N.J. 07719.

The Implementation of Yoga as a Discipline in Teaching the Exceptional Individual

Georgia Hall, M.A., Adapted Physical Education Specialist, Office of the Los Angeles County Superintendent of Schools

The popularity of the ancient art of Yoga, comprising a group of age-old physical movements and exercises, has increased tremendously in the United States in the past decade. The practice of Yoga integrates the mind, body and spirit through a variety of Yogic postures (asanas), breathing techniques (pranayama), and meditation. In the beginning, Yoga was practiced for spiritual enrichment, but it was soon discovered that Yogic disciplines are useful aids in therapy and achieving physical development (12). Although Yoga has evolved to include the physical, mental and spiritual development of individuals, this presentation deals only with the physical aspects of Hatha Yoga, the oldest existing practice of physical culture in the world.

What is Hatha Yoga?

According to deVries, Yogic exercises involve holding a static position (posture or asana) for a given period of time with the joints involved locked into a certain position which places the muscles and connective tissues at their greatest possible length. Conventional calisthenic exercises used for the purpose of improving range of motion have usually involved bobbing, bouncing or jerking movements in which one body segment is put in motion by active contraction of one set of muscle

groups, then the momentum is arrested by antagonistic muscles at the end of the range of motion. The antagonists are stretched by the dynamic movements of the agonists. The practice of Hatha Yoga, however, can improve muscle tone and flexibility without bouncing or jerking movements (10).

Since the practice of Yoga in this country is comparatively new, studies comparing this form of physical development to other more conventional exercises are few. It is generally agreed that physical fitness involves three desired results: increased strength, flexibility, and endurance. The ability of Hatha Yoga to achieve desired results in all three areas is questioned by many physical educators who hold the view that endurance can be increased only by intense and sustained physical exercise, and there are numerous research studies that substantiate this view.

Review of Literature

Recent studies comparing Yogic exercises to other types of physical development reported by the *Indian Journal of Medicine* and the *Indian Journal of Medical Science* indicate various Yoga Asanas may influence the body with some degree of specificity. Some enhance physical fitness and flexibility while others exert favorable physiological (circulatory and respiratory) influences. Physical endurance compared to strength and flexibility seems to increase least by engaging in Yoga exercises (12, 13, 14, 15, 16, 17).

A study by deVries to explore ballistic and static methods to increase stretching determined there was no significant difference between the two methods of exercise (10). A study of Gharote suggested that practice of Yoga Asanas may improve flexibility (11).

The Implementation of Yoga in Adapted Physical Education

With the exception of severely handicapped individuals, and those with short attention spans most children are capable of participating in modified Yoga sessions. Incorporating Hatha Yoga into the Adapted Physical Education curriculum has many possibilities. It could be used in conjunction with other activities as a change of pace or diversion, or by itself, depending on the interest and physical capabilities of the students. It could be practiced outside in the shade when the weather is too hot or smoggy for vigorous activities, or inside when it is too cold, windy or rainy to be outside. All that is needed to practice Yoga is a mat (preferably

individual) or soft rug to lie on, and knowledge of the basic Yoga asanas. *Yoga for Children*, by Eve Disken, and *Be A Frog – A Bird or a Tree*, by Richard Carr, are books specifically designed for children and are excellent references. Yoga classes are offered at community colleges, parks and recreation facilities, Y.M.C.A.'s, adult education centers, etc., and would be particularly beneficial for those who plan to teach it to their exceptional students.

Consider the possibilities of introducing Yoga to the hyperactive, the visually handicapped, deaf, educable and trainably mentally retarded, aphasic, and autistic children. Teen mothers and rehabilitation students could also benefit. Because Yogic postures are practiced in a very slow and methodical way, they can facilitate the ability to relax the body. This is a desirable objective for many special education students and particularly for the extremely hyperactive student. Because Yogic postures are practiced individually, they may be desirable for those who find physical interaction with others too stressful to handle. Since many Yogic postures are practiced in a stationary position, it would be an ideal activity for the visually handicapped student for whom movement variables, such as space, force, time, balance, etc., present difficulties. Deaf students are taught Yoga by visual aids such as sign language, demonstration or picture illustrations, and the slow, low-geared movements are especially adaptable for the educable and trainable mentally retarded, autistic, and aphasic student. Any Yoga student who has ever taken a course in prepared or natural childbirth must have noticed the similarity to Yoga. Both disciplines enable the mother-to-be to know and be in touch with her own mind and body, and are extremely complementary. *Healthy Pregnancy – The Yoga Way*, by Judi Thompson, a guide to the safe practice of Yogic breathing, exercises and diet during and after pregnancy for physical and emotional well-being and an easy birth is a good example (9). Therefore, Yoga asanas would be an appropriate activity to include in an adapted physical education program for teen mothers. Specific Yogic postures could be used successfully in rehabilitation programs where the inability to maintain and develop strength or flexibility during long periods of convalescence is often a problem. Extreme precaution should be taken when considering Yoga for individuals with such physical handicaps as orthopedic, cerebral palsy, hydrocephalic, etc., and should be discussed with the student's doctor or therapist to determine which postures could be contraindicated.

Yoga Book References

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5. Luby, Sue *Yoga Is For You*. New York: Prentice Hall, Inc., 1974.

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17. _____. "Studies on the Effect of Some Yogic Breathing Exercises (pranayama) in Normal Persons," *Indian Journal of Medical Research*, 63:1062-1065, August, 1975.

Designing a Motor and Language Program for the Severely Developmentally Disabled Child (DCH)

Bonnie Stubbs and Peggy Reagan, Adaptive Physical Education Specialists; Nancy Thompson and Betty Williams, Language, Speech and Hearing Specialists, Office of the Los Angeles County Superintendent of Schools; and Dolores Sweigart, Supervising Physical Therapist, Crippled Children Services

With the passage of Public Law 94-142, all children are guaranteed public education which emphasizes special education and related services designed to meet the unique needs of the students. Approximately 110 severely handicapped children qualified for the Development Center for the Handicapped (DCH) special education program at Pace and Bunche schools.

The language, vision and physical education specialists spent one year working independently with the DCH students and felt somewhat frustrated about the appropriateness of their methods. The specialists formed an inter-disciplinary team and began to combine ideas about how to work with each pupil. The team began to realize there was an element of awareness that each child needed to develop as prerequisites for formulation of specific goals in the areas of speech and language, physical education and vision. This awareness of environment: auditory, visual, tactile and kinesthetic, was imperative as foundations of learning necessary for the child to reach his/her maximum potential. For this

potential to be met, the team attempted to look at the needs of the total child. Each specialist contributed the expertise from her own field in the formulation of goals and objectives.

Scoring

A multidimensional scoring system was used breaking each objective down into three graduated learning steps. A score of number "1" denoted that the student met the objective on the first trial. The second trial included the initial instructions with an additional cue either visual, auditory and/or tactile. A score of "3" denoted manipulation of the student by the instructor through the completion of the task. Since ten responses were recorded, there was a possibility for thirty actual trials if the student required three trials to achieve one recorded response. A sample chart is included.

Organization and Methods

The specialists agreed on a specific time of day when they could all be present to work with the children selected for the program. They tried to maintain a consistency in environment and method. The children were either removed from their classroom to another secluded room with a minimum of outside distractions or worked within a section of their regular classroom that was partitioned off to create a more controlled environment. Equipment and materials used remained the same throughout the project to allow the children to develop a familiarity with them. Each specialist worked with specific children and followed that child to completion of his/her particular objective. This in practice meant that at times each specialist worked with a child on objectives that were not always within their specific field. Emphasis was placed on maintaining consistency in commands given and other gestural cues. A reliability check was done occasionally to insure that the scoring procedures were being accurately followed. The team met weekly to discuss the appropriateness of established goals and the progress of each child. The team also spent time after each daily session discussing aspects of this new approach.

Sample Case History

Student H.A.

1. Age: 8 years old
2. Medical Data: Meningoencephalocele with hydrocephalus, status

post ventricula peritoneal shunt, functioning well: severe visual handicap; non-ambulatory; profound mental retardation. Medication — Phenobarbital as anti-convulsant.

3. Developmental Level: Bayley Scale of Infant Development, 1976 — Mental age below 2 months; Preschool Attainment Record (PAR), 1976 — Attainment age 6 months; Crippled Children's Services (CCS) Growth and Development, 1976; Gross Motor age — 7 months, Fine Motor age — 12 months.
   Koontz Scale, 1976: Gross Motor age — 6 months; Fine Motor age — 5 months; Social age — 4 months; Language, receptive age — 5 months; Language, expressive age — 6 months.
4. Home Environment: Child lives with natural parents.
5. General Behavior: She is very passive child with little reaction to the general environment although she does respond well to people. She has little receptive language and is non-verbal.

Program for H.A.

Motor Goals: To develop locomotor movements of creeping on hands and knees.

Objectives:

1. When placed in a hands and knees position (hands on floor, elbows resting on knees, seat on heels, supported in back by instructor), pupil will maintain position with head up for 5 seconds, with 80% accuracy in two consecutive sessions. Trial 1 — Maintains position; Trial 2 — Verbal command added "H.A. stay"; Trial 3 — Verbal command and instructor holding child in position for 15 seconds.
2. When placed in a hands and knees position (hands and arms not resting on legs, seat on heels, supported in back by instructor), pupil will maintain position with head up for 5 seconds, with 80% accuracy in two consecutive sessions. Trials same as No. 1.
3. When placed in a hands and knees position supported in back by instructor, pupil will maintain position with head up for 5 seconds, with 80% accuracy in two consecutive sessions. Trials same as No. 1.

Language Goals: To increase receptive language ability, to respond to a one part simple command.

Objectives:

1. Following an appropriate demonstration, child will place hands on ball, given an auditory cue, "Take ball," within 30 seconds, as demonstrated with 80% accuracy in three consecutive sessions. Trial

1 — Verbal command and hands placed and removed from ball; Trial 2 — Repeat Trial 1 twice in the 30 seconds; Trial 3 — Verbal command with child manipulated through activity.

Summary: At the beginning of the school year H.A. was unable to maintain body weight on arms when placed in hands and knees position. H.A. can now maintain position with head control for 5 seconds.

Summary of Program

The DCH population has too long been thought of as individuals to be diapered, fed and whistled at with no improvement expected. The Interdisciplinary Team approach incorporated ideas from all professionals interested in helping these students reach their potential. If goals and objectives are established on appropriate levels with small enough increments and are implemented in a consistent, individualized approach, the DCH child also can advance his or her position in life.

The German Model of Motology

Dr. Ernst J. Kiphard, Westflisches Institut fur
Jugendpsychiatrie und Heilpadagogik, Hamm, Germany

In 1976, after extensive work of many experts in motor development and motor behavior, an official working party was established in Germany. The "Association for Psycho-Motor Activity" is an inter-disciplinary union of physical educators, special educators, pediatricians, child neurologists, psychologists, and physiotherapists, all interested and engaged in the field of motor activity. Within the association a special board was formed to develop the foundation of a fundamental doctrine of motology.

Motology is the science of neuro- and sensory-motor development and individual and social psycho-motor behavior.

Motogenetics comprises the fields of neuro-motor, perceptual-motor, psycho-motor and social-motor development in children.

Motopathology deals with the etiology and phenomenology of motor disturbances (neuro-motor, perceptual-motor, psycho-motor and social-motor problems).

Motodiagnostics includes tests and assessment procedures for measuring and evaluating pathological motor patterns or motor behavior.

Motopedagogics is the concept of personality education through movement.

Mototherapy comprises movement oriented methods to treat motor impaired children, i.e., neuro-motor, perceptual-motor, psycho-motor and social-motor indications.

The learning objectives and qualifications of the curricula vary according to the motor phenomena and manifestations:

Neuro-Motor lays the stress on neuro-muscular functioning.

Perceptual-Motor accentuates the functional unit of sensorial input and motor acting output.

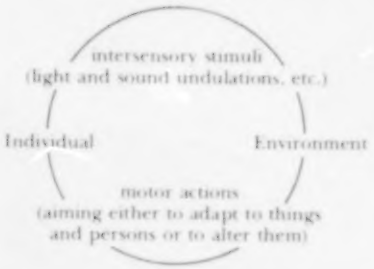
Psycho-Motor stresses the identity and integrity of mental, emotional and motor processes. Psycho-motor activity is the functional unit of perception, cognition, affection and acting.

Social-Motor emphasizes the aspect of motor interactions and communication as a means of social learning.

In our approach we have chosen the tern "psycho-motor" in order to mark the educational and therapeutic concept of *Education through movement* (Kiphard and Huppertz, 1968). The theory being that in that way the child is assisted in finding his individual modes of expression in a basic joy of movement. He thus forms a link between his ego and his environment.

The philosophy behind the model of motology is the *theory of motor adaptation* (F. Schilling, 1974). As the child lives and develops in coherence with his surrounding world, he must first develop the means to adapt to his world. But as the child grows older, he must also learn to adapt the environment to his own needs. This applies to things as well as people. This means that the child should learn by means of various movement situations how to get along with himself and with his surrounding material and social world.

The interaction between the human organism and environment occurs in the form of a "homostatic" process, a permanent maintenance of a biological equilibrium. Each environmental object sends off "acting directions" or "movement questions" to the child. And the child, after perceiving the situation, responds via movement. The environment, therefore, actually determines perceptual and motor patterns.



With a motor impaired child, the organism is not able to integrate the personality into the environment. Here, special help has to be given to enable him, in spite of his handicaps, to develop his motor abilities as far as possible. This can be done by multiple variations of motor situations and conditions. Each time the child is forced to adapt his perceptual and motor patterns and alter his strategies of motor behavior, he will increase his ability to generalize his perceptual-motor patterns. He thus reaches the skill of combining and applying a set of "movement consistencies" in a wide variety of situations (Keogh, 1975). In other words: he achieves at the end a "consistency" of motor reactions (Turvey, 1973).

The concept of "education through movement" has proven to be an excellent method to further the development of the individual personality of the exceptional child. Now there is a great need to transfer these therapeutic experiences to the field of normal, elementary and primary physical education.

Physical education aims at the improvement of motor achievement. Motopedagogics, in terms of psycho-motor education, goes further. It uses movement for general personality educational purposes. Overpowering joy, encouragement, confirmation and success form the pillars of an inner ability to bear difficulties and to tolerate conflict.

This enables the child to experience himself in his struggle with the various environmental situations. By that, we mean the whole range of aids which the teacher offers in quick succession: ribbons, ropes, bobbins, small boards, sticks, laths, foam rubber, bags of sand, balloons, and also balancing equipment, equipment for rolling and riding, climbing, overcoming obstacles and jumping.

The practicing child enjoys "answering" the repeated "movement problems" with his own way of finding a solution. The movement problem can come from a piece of equipment if it attracts the child to try it out, or the children themselves hit on the idea of combining various pieces of equipment. It will be necessary, in the near future, to revise the usual rigid equipment of the gym and to add new, fascinating and child oriented equipment.

The movement task can also be set by the children themselves as they try out and "explore" the various possibilities of the respective situation. There is no norm, no force, and no obligation. The child will correct himself if an attempt to solve the problem does not succeed immediately, and with time he will be able to predict the result of his motor action by experience.

In Germany, official additional training courses for physical educators have already started. During one year the students learn the theory and practice of motodiagnostics, motopedagogics and mototherapy. After finishing their studies, most of them will be able to work at institutions with handicapped children. We also have started to train psychomotor experts and motologists in a 4-year course at university level. The students finish with a master's degree or diploma and will be engaged in leadership positions or as consultants with health authorities or doing research work and university teaching in the field of motology.

The Pre-Adolescent: an Exceptional Individual

Dr. Friedrich J. Schneider, Department of Movement, Health and Leisure, Boston University

Reorganization of Physical Education for the junior high school must focus on the basic requirements of the curriculum, which includes: "the planning of teaching and learning opportunities utilizing a variety of knowledges directed toward the maintenance or modification of behavior."[1]

The content of a physical education curriculum should therefore consider the developmental level of the student and combined with results of modern research offer the most relevant activities in order to assist the youngster in his adjustment and maturation.

Psychological Aspects: Body Image

The pre-adolescence phase of human development is perhaps one of the most important periods in the life of boys and girls. The uneven growth patterns of different body parts and the differences in growth and maturity between boys and girls can present serious adjustment difficulties. The pre-adolescent may be forced to seek new peer groups because of the sudden changes in his/her own appearance and maturity level making it difficult to adjust to criticism and harrassment. In boys, the strength and performance levels are associated with peer acceptance and leadership roles. A slow physical development after age eleven may seriously affect the youngsters' social status and personal feelings. In girls, sudden increases in height and other predominantly female

features might create disturbing conditions similar to those found among boys.

Osterrieth (1969) stressed that,

> Between the ages of 11 and 15, a whole series of profound modifications will take place, which will affect organic equilibrium as well as intellectual structure, the social and affective integration as well as the image that the individual has of himself and of his environment (page 12).

The image the person has of himself is dominated by the significance of the body because of the radical physical changes taking place. The individual has to revise his body image, which according to Josselyn (1959) is derived from his experiences, perceptions, comparisons, and identification with other persons both real and fantasied. On the basis of the body image fluctuations, the individual may reject his physical self and show strong behavior changes to cover up for physical inadequacies.

Osterrieth (1969) explained this behavior by saying: "Because of the tormenting feeling of inadequacy, he begins to turn inward on himself, to burn his bridges, to break off contacts in order to spare himself defeats" (p. 12). He continued, ". . . To be himself, to affirm himself in his new status, he must get away from and differentiate himself from all that has to do with his old status" (p. 12).

These behavioral adjustments to the constantly changing physical appearance and consequently changing motor performance requires a reorganization of thoughts and feelings of the self and the body.

Self Concept

Feelings and thoughts about the self are brought about through interaction with others and through the influence significant others have on the individual. This interaction assists the person in formulating a concept of himself, of which the body image is an important component.

Mead (1934) described the self concept as emerging directly from the behavior of others toward the individual and indirectly from physical and mental attributes of the individual himself.

The self concept, according to Elder (1968), in interpreting Sullivan's development theory, is viewed as rigid and relatively resistant to change during adolescence. This consistency of the self concept is supported by Medinnus and Johnson (1969) who in investigating the influence of social roles on personality stated: "The performance of a role leads to

increased expectancy on the part of others that the performer will not relinquish it. These firmer, more explicit expectancies impel one to act even more consistently in harmony with them" (p. 566).

The adolescent through his behavior grows in accepting an identity, a role which is clearly defined by a marked degree through the influence of peers and important adults.

The literature supports the assumption that the self concept is conceived early in life and is usually stable by the adolescent years.

Engle (1959) tested 104 eighth graders and 68 tenth graders in a pretest situation and two years later in a post-test in order to establish the degree of stability of the self concept. The hypothesis implied that the stability, internal organization, and crystallization of the self concept was achieved earlier in the personality development. The study proved a relative stability of the self concept. Subjects with a negative self concept were significantly less stable than subjects with a positive self concept.

Curtis (1967) found that eighth grade boys who were involved in interscholastic athletics had a significantly higher self ideal, self concept, and level of self acceptance than boys in the same class who were not involved in interscholastic athletics. He also found athletes attributed higher self concept to non-athletes than the non-athlete group attributed to athletes.

Curtis (1968) investigated the differences between positive self concept and negative self concept groups as well as the differences between positive and negative body image groups in the learning and performance of a gross motor task. He concluded that there were no significant differences between the positive and negative self concept group during the learning of the motor task. Yet, there was an observable trend in the positive self concept group to achieve higher scores in the performance phase of the study, that there were significantly better scores of the motor task, and that there was a trend in the positive body concept group to achieve higher scores in the performance phase of the study.

Schneider (1977) found no significant differences in self concept between boys (n=156) and girls (n=145) of the seventh grade.

Oxendine (1968) observed that boys are slightly taller and heavier than girls before age ten while girls show a difference in height and weight over boys up to age thirteen. A growth spurt of the boys after that age brings boys past girls in physical size.

Jokl and Culver (1941) tested boys and girls between age six and

eighteen in the 100 yard dash, the 600 yard dash, and the twelve pound shot put. Significant sex differences were found at all levels. In shot put boys differed significantly from girls between age six and thirteen. Boys and girls showed relatively the same improvement rate in the 100 yard and 600 yard dash between the ages of six and thirteen.

Schilling (1973) found significant differentiation between boys and girls, particularly in the age extremes three to six and ten to fourteen. The pre-school years showed better performances among the girls in balance, hopping, lateral jumping, and lateral movement while in the later years boys equalled the performance of girls with the exception of sideways jumping.

In the body coordination item balance, Seashore (1947) using a dynamic balance task of walking the length of nine 10 foot long balance beams of various widths and counting the distance and number of steps which could be taken, found that the peak performance was achieved at age eleven.

Cron and Pronko (1957) used the same dynamic balance task as Seashore. These investigators found that girls performed better prior to age eight. Boys excelled after that age. This result is in support of the study of Seils (1951).

Schneider (1977) found a significant positive difference in balance, lateral jumping, and lateral movement in girls over boys while no difference was found in hopping.

Changes in body image and self concept occur upon the influence of significant others, peers, and adults of importance. The empirical research reporting on the effects of camping programs give support to this assumption. Changes reported on self concept or body image can be the result of constant influence of peers and respected adults during the close twenty-four hour camp contact.

Baker (1960), Wetmore (1972), Sise (1967), and Rohrbacher (1971) report changes in self concept and/or body image in pre-adolescent and adolescent youngsters on the basis of planned, structured, and innovative camp experiences.

In a project attempting to determine the influence of significant adults on activity preference and self concept, Ludwig and Maehr (1967) studied the effect of positive and negative feedback from physical activity experts on the self concept of seventh and eighth grade boys. These experts recited approval or disapproval statements regardless of the performance of the youngsters, while the boys performed various physi-

cal tasks. It was observed that the self concept change positively with the approval statements and their activity preference was positively influenced as well. The results supported their hypotheses that the self concept change depends on the reaction of significant others and that such a change influences preference and choice.

The influence of a highly qualified and trained specialist can also influence the self concept and motor performance. In an experiment by Yeatts and Gordon (1967) the AAHPER and Gordon's "How I See Myself" test was administered to seventh graders (n=75) pre- and post-one year of physical education. For twelve months the experimental group was taught by a physical education specialist in dual and individual activities. It was higher level and was more skilled in self assessment than the group which was taught by a regular physical education teacher.

Research pertaining to various teaching methods and physical education programs also reveals changes in self concept. Martinek (1976) in testing various teaching modes reported a significant positive improvement in motor fitness due to a teacher directed (vertical) approach to physical education programs. The teacher-student shared decision-making physical education program (horizontal) showed marked yet no significant improvement in motor skill over the control group. In regards to changes in self concept, this study showed that a teacher-student shared decision-making atmosphere resulted in significant positive changes in self concept in comparison to the control group.

Samuelton (1969) studying the effects of a specially structured seven week (36 sessions) physical education class upon the self concept of low self esteem tenth grade girls (n=11) found that the members of the experimental group who were exposed to creative movement, dance, and rhythmic activities scored significantly higher than the control group (n=9).

Schneider (1977) found that seventh grade boys who participated in a fifteen session movement exploration and mime course scored significantly higher in body image, balance, lateral movement, lateral jumping, and hopping than girls who participated in the same program and boys and girls who participated in the regular physical education activities (flag football and soccer for boys and soccer and basketball for girls).

Williams (1972) reported that two comparative approaches to teaching

physical education (physical fitness and a sports program) had no differential effect on the self concept of students.

Gussis (1970) found that a sport skill oriented physical education program consisting of twenty instructional periods achie-ed a statistically significant improvement in skill performance of tenth grade boys (n=163) but was unable to find significant changes in body image and self concept.

This review of literature provides us with substantive data from human movement studies that are appropriate for the development of a relevant curriculum.

The theoretical framework of instruction must consist of four major headings: "learning is the desired response; teaching is the act of systematically presenting stimuli and desired responses occur; and curriculum represents the major source of stimuli found in instructional settings to be utilized" (McDonald and Leeper, 1965).

The curriculum for junior high school physical education therefore should entail all those stimuli which assist the youngster to grow to his/her utmost potential. If we consider a healthy body image and a positive self concept important and are interested in improved body coordination for optimal physical functioning then the stimuli and the presentation of such should be carefully chosen.

The author advocates that especially for the junior high school level, a school system must choose a teacher of physical education who is a highly qualified and trained specialist who will present the material in a way that is supportive and rewarding for the student.

The curriculum itself should be enriched with programs such as: movement exploration and mime, which is based on problem solving techniques, supporting non-verbal interaction, interpersonal relationships and personal growth; adventure style outdoor education programs, which can in part be offered in the regular traditional classroom setting but should culminate in a residential camp experience, where emphasis would be placed on teacher-student decision-making and problem solving.

The elimination of traditional sport activities, if we consider the meaning sport to be a series of competitions against time, against team, and against self, the junior high school level would make way for this "inductive" curriculum development.

New units of instruction would be designed, the innovations would be originated by the teachers and immediately tried out by the school. Such a curriculum should be continuously developed and improved.

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Management of Assaultive Behavior

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Management of Assaultive Behavior is broken into eight learning units. The units are: 1) description of assaultive behavior, 2) staff reaction to assault, 3) patterns that predict assault, 4) major types of assaultive crisis, 5) evasive self defense, 6) physical intervention, 7) mechanical restraints seclusion, 8) reporting and recording assaultive incidents.

Unit 1 — Describing Assaultive Behavior

In this learning unit the trainee will learn two models of assaultive behavior. The first describes the assaultive incident as part of a larger behavioral chain called the assault cycle. This cycle is divided into five separate phases. Therapeutive interventions and clinical observation skills are attached to each of the five phases.

The second model in this unit is a continuum of assigned responsibility for assaultive incidents. The trainee is taught to use this continuum to identify the degree of deviance a description of an assaultive incident has from currently accepted professional ideas about assault.

Unit 2 — Staff Reaction to Assault

In this unit the trainee learns to identify staff behavior during an assaultive incident through a model of physiological arousal. The trainee should leave this unit, having developed a personal system of dealing with his/her own physiological arousal during an incident. The trainee

also learns to accept physiological arousal as a natural and healthy response to being attacked by a client. The second part of this unit defines six sources of external and internal pressure that limit or modify the reaction to assaultive incidents.

Unit 3 — Patterns that Predict Assault

In this unit the trainee learns a set of models that can be used to predict potential for assaultive behavior. These models predict on an interpersonal small group and large group basis.

Unit 4 — The Major Types of Assaultive Crisis

In this unit the trainee learns to sharpen his/her skills in diagnosing and differentiating between three major types of assaultive crisis. The trainee also learns to generate the pattern of communication appropriate to each one of these crises.

Unit 5 — Evasive Self Defense

In this unit the trainee will learn to defend herself/himself from attack by a client. The defense methods are similar to those used in Aikido and other oriental martial arts, but they stop short of inflicting pain or injury upon the attacker.

Unit 6 — Physical Intervention

In this unit the trainee learns to use method of containment and transport that are suitable for national television viewing audiences. Emphasis on teamwork and team responsibility are the highlights of this unit.

Unit 7 — Mechanical Restraints, Seclusion

In this unit the trainee learns the proper application of behavioral restraints and seclusion.

Unit 8 — Reporting and Recording Assaultive Incidents

In this unit the trainee learns to use the assault cycle graph in conjunction with the basic who, what, where, why, when and how of recording, to generate incident reports and other documents that will stand up during civil or criminal trials.

Early Duchenne Muscular Dystrophy

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What is Duchenne Muscular Dystrophy?
(Pseudohypertropic Muscular Dystrophy)
A Neuromuscular Disease

"The child appears normal at birth. The clinical signs become evident only after the upright posture has been achieved. Weakness of the muscles which support and motivate the pelvic girdle becomes apparent by the patient's lack of agility and impaired performance in climbing stairs. Gait becomes broadbased and later resembles a waddling motion. Lordosis develops and becomes increasingly accentuated over a period of years, ultimately resulting in a pronounced swayback. Calf and other muscles enlarge. Muscle stretch reflexes gradually disappear, following a general pattern, the ankle reflex being the most persistent. The feet gradually become distorted into a posture of equinovarus. Differential wasting of the pectoralis major muscles occurs as other trunk and shoulder girdle muscles deteriorate. Wheelchair existence becomes mandatory. Contractures form at ankles, knees, hips, and later at the elbows, shoulders and wrists. Scoliosis appears. Vital capacity becomes reduced. With continuing enfeeblement the patient becomes bedfast, and eventually the disease is terminated, commonly by a respiratory infection" (2:19-20).

Why the Educator Should be Aware of the Disease

Many times educators are prepared for a field they are about to enter, but in a very cursory manner. Their exposure to the handicaps with which they may come in contact is such that they know the name of the handicap and it's symptoms, but are not really taught how to identify and work with the handicapped individual.

The first time a person comes into contact with the Duchenne Muscular Dystrophy boy certain characteristics are typically present in the early stages of the disease.

1. Lordosis (Swayback) while walking.
2. Child in equinus (walks on toes) when walking.
3. Can not run.
4. Works to get self up from the ground, eventually progressing to the Gower Sign (walks up body with hands).
5. Later unable to get self up from the ground.
6. Falls frequently.
7. Pseudohypertropic calves (enlarged calf size).

Once the teacher knows the boy has Duchenne Muscular Dystrophy the teacher might ask, what is he supposed to do with the boy.

Teachers should try to fit the child into many activities. The child may be made an important part of the activities through *adaptation* in the manner in which he participates.

A lighter ball may have to be used, a hitting implement may have to be of a different material, and a basket may have to be lowered so that the boy can participate successfully, using the physical ability he does have; thus hopefully maintaining his self worth.

If a pool is available, then use it. Here the boy will be able to feel as if he is not handicapped, and the progression of the disease will slow down through actively participating in the water.

In the water it will be important for teachers to get to know the boys as many MD boys will appear to be drowning. In reality this is their own unique style that they acquire as the disease progresses. It will be observed that their buttocks will float; this is because as the disease progresses muscle turns to fat, and the boys will also find they can no longer touch the bottom of the pool, although many enjoy being pushed down into the water.

The Duchenne MD child will follow the progression of walking without support, to walking with adaptive aid, and eventually will need a

wheelchair. Many of the children will have an operation to slow down the progression, and the operation will be accompanied by the use of leg braces.

The proper lifting of the boy is important in order to prevent hurting the boy and yourself. When lifting the boy it is important to realize that the muscles are weak, and that lifting him by his extremities may cause injury. His reactions should be monitored to alleviate this concern.

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Orff-Schulwerk: Adaptations for Special Populations

Sue Flothe, Adaptive Physical Education Specialist, Santa Clara County Superintendent of Schools

My first experience with Orff-Schulwerk began seven years ago. When I attended a class taught by Carol Hampton Bitcon. Since that time my learning of Orff-Schulwerk techniques and ideas has been derived through interaction with my students, through reading relevant material, and through workshops I have conducted on *basic* Orff-Schulwerk techniques. I stress the word basic because my expertise is limited to working with multihandicapped, deaf, and blind children within Santa Clara County. My main purpose has been to adapt the Orff-Schulwerk techniques whilst still maintaining the basic philosophy of the Orff program.

Orff-Schulwerk is a means of self expression, a method of communication, a positive self exploration. It is an enriching, growing experience for all participants. It touches the child in us all.

Much has been written on Carl Orff and the Orff-Schulwerk programs. The best description I have found is in Carol Hampton Bitcon's book *Alike and Different: the Clinical and Educational Use of Orff-Schulwerk*. The following is an excerpt from this exceptional book.

> Orff felt that all art forms should be integrated in the important formative years. Instead of using a standard theoretical teaching method, everything in the child's experience, music, movement, speech, should be combined to provide raw material for his or her own creative efforts.
>
> Orff[2] based his philosophy on the premise that because a child

learns to speak before he learns to read and write, it follows that he should have a "musical language" in which he feels comfortable before being required to perform the more difficult tasks of playing a traditional instrument or studying music theory. Therefore, "Music for Children" as Orff has developed it, is elemental in the literal sense of that word. It deals with the elements, the basic ground work from which more complex ideas grow. The child learns to feel rhythms, hear melodies, and put his own feelings into those rhythms and melodies before he is required to read and write music. . . .

Both speech and movement are instinctive — we have done them from our beginnings. But more than this they are rhythmic. If we can adopt these functions, which we have done so naturally, for so long, to our teaching pedagogy, it will make our learning of musical skills easier and more certain.

This unique music educational work in its present form has been developed since the Second World War. The original idea of the creative, educational power of music is realized in that it is already found in Plato's ancient world of ideas. With Schulwerk, Orff brought back to reality what was obscured by two thousand years: the development of the consciousness through the elementary forces of rhythms and sounds in conjunction with the magic word. This is intended to begin in the child and accompany the growth and maturing of the individual. Orff Schulwerk is life long learning.

Orff developed for his Schulwerk a special instrumentation. It is based above all on rhythm instruments, xylophones of all sizes, glockenspiels, kettle drums and tambourines, tambours, hand bells and triangles. Gradually melody instruments are added, specially recorder and deep strings. The rhythmic element remains the basis of the entire music making. It grows from word and verse, the texts have purposely been taken from old language tradition, children's rhymes and magic sayings, prayers, verses from fairy tales and folk songs. The original is returned to magical origins: pictures are transformed into music, music into movement: the imagination is stimulated, nourished and can unfold in a spectrum of sound of its own kind. In his Schulwerk, Orff not only returns to an elementary world of sound, but also demonstrated through the creatively comprehended and

interpreted history, routes to a new movement with objects of the spiritual world.

The play pieces of the Schulwerk are not to be understood as final, unchangeable composition, but rather as models which can be imitated, transformed and further developed on an individual basis. No boundaries have been set on the imagination: in a short period of time the Schulwerk has conquered foreign lands and continents.

I have also devised a pre-Orff program that I use, to a large extent, with my deaf-blind population. This program is designed to help the children become aware of their environment and the people within it.

The program was designed with socialization and enjoyment as the key ingredients. I felt that if I could motivate my population to *want* to be in the Orff Room, then socialization with others and environmental awareness would follow. Eventually I could introduce sharing instruments, taking turns, etc. My purpose now is to make the participants rely less on introverted and self-stimulating behavior.

My Orff Room consists of a stereo with a P.A. attachment and padded speakers; a spot light (red, yellow, blue) system which connects to the stereo which picks up low, medium and high frequency sounds; a light dome which connects to the stereo with the same adaptations as the spotlights; a black light; instruments that conduct vibrations (i.e. bass drum, kettle drum, tambours, etc). Foam is also a great conductor of vibrations so I often introduce port-a-pit equipment (socio-bowl, octagon, airflow mattress, shapes, etc.) for the children to explore while the speakers are placed against the sides of the equipment. Balloons, foam shapes, textured objects, aromas and flashlights are also available for manipulation and exploration.

Music, specifically records and tapes, is played throughout the process. Whatever music I choose is whatever works. I look for music with good rhythmic sounds and with alot of base. Music, I find, is very motivating to the deaf-blind population I work with. They are attracted by the vibrations. Music is also very motivating to me. I vary my selections from jazz, country, pop, classical, etc. to allow for mood change and rhythmic variation. It is also very motivating to the staff. I find that the Orff program runs more smoothly and with alot more energy if my staff is having fun along with my kids.

Another means of communicating the concept of rhythm in a more tactile way is with the use of the parachute. The speaker is placed in the

center of the room and the parachute is moved to the rhythm of the music over the children, or with them if they choose to participate. Often times I will use flashlights with the parachute, for many of my children who are legally blind have light vision. This works very well with my population, but I would not recommend it for a population that is seizure prone or for those who have difficulty processing sensory stimulation.

My room size is about 10' x 10' (the ideal room size should be large enough to give the population space, but not so large that it promotes wandering off), and has a large round carpet in the center to promote the idea of sitting in a circle. My class sizes vary from 3 to 8 children with 2 adults assisting. This makes for a controlled situation. The extraneous stimuli should be kept outside of the room and all equipment not being used should be out of sight, otherwise a great deal of time is spent monitoring and disciplining and the child experiences a great deal of failure. The environment should always be set up so the child can succeed.

There are numerous ways to enhance the motivational level of each child. I was lucky enough to know a teacher of the deaf-blind who has a degree in electrical engineering. We are still in the process of creating new and fun experiences to include in the Orff Room. The possibilities are endless, but the method is Orff-Schulwerk . . . creating, growing and experiencing. As Carol Bitcon says in her book, "Orff-Schulwerk is life long learning."

Notes

1. Sue Ellen Page Johnson, *The Journal*, Rochester Early Childhood Association.

Therapeutic Recreation: A Successful Leisure Time

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A world where fun and excitement occur while leisure skills are learned happens in Therapeutic Recreation. Disabled participants eagerly join into activities which are developed or adapted to meet their ability level. Success can be achieved by those who previously failed when their ability is thought of first not the disability. Leisure time activities allow a child to learn about and the adult to become aware of the world about him. During the summer, day camps offer opportunities to socialize in group settings, play games, prepare lunches such as salads, tacos and ice cream, grow a garden with fast rooting plants like bean sprouts, visit local shops such as a bakery and exchange money for articles bought, make nature crafts or kites, visit special places such as the beach, swimming pool, Busch Bird Sanctuary, etc. They have overnights where they sleep under the stars and have a campfire with songs and activities.

The Day Camps stress appropriate behavior and utilize behavior management techniques. Whenever possible the day camps are mainstreamed with children from the community allowing camaraderie and models for the special children. If the day camp is for young adults, then the program is age appropriate activities tailored to meet their interests.

Special programs offer information, activity or competition for the disabled individuals.

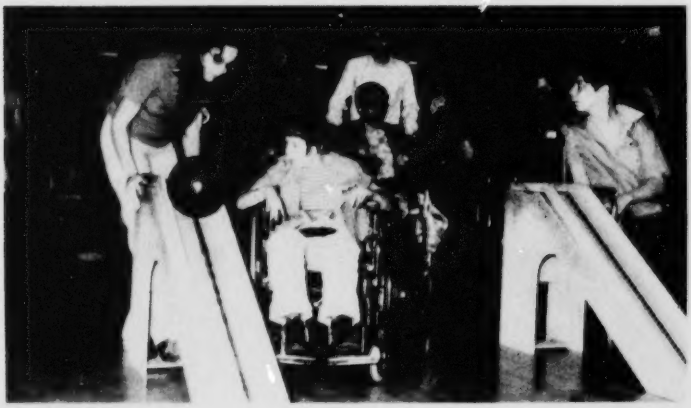
The California Association for the Retarded Bowling program had

103

over 4,000 participants entered throughout the State. These bowlers collect 15 scores between September 15 and December 1. These scores are averaged and entered into a handicapping formula. They are then eligible to bowl in local tournaments which qualify them for County, District, and State Tournaments. The 1979 State Tournament will be held in San Diego on May 19, 1979.

The Exceptional Games offers an opportunity for competition for physically impaired children. They participate in Track and Field events designed for their sex, age group and physical functioning level.

The Special Olympics is designed as a year-round program to encourage participation and physical fitness in the Mentally Retarded individuals. Each year, competition is held in local cities and area meets. Over 2,500 athletes competed in 10 sports in 1978. These sports — bowling, frisbee disc, basketball, floor hockey, swimming, gymnastics, diving, volleyball, soccer and track and field are divided into sex, age group, and ability levels. All athletes are able to participate not only those with the most ability. The Summer Games will occur at U.C.L.A. and Santa Monica City College, June 22-24, 1979. The Winter Games will take place in April with Downhill and Cross Country skiing events. The International Summer Special Olympic Games is scheduled to be held August 8-13, 1979 at the State University of New York at Brockport. Three thousand five hundred mentally retarded individuals who have qualified through participation in Special Olympic Games in each of the 50 states, the District of Columbia, Puerto Rico and more than 20 countries will compete.



Modern Kinesiology and the Individual Education Program

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The enactment of the Education for All Handicapped Children Act of 1975 (P.L. 94-142) requires that a program be developed cooperatively between the home and the school for each individual child. The central thrust of this legislation is an Individual Education Program which must show measurable accountment for the positive change in the motor behavior of each child. Thus, it is essential that those who work with the motor development of handicapped children in an educational setting possess conceptual models of efficient motor behavior to be taught, be able to compare existing behavior of each child with these models and hypothesize physical activity to resolve discrepancies between present levels of educational performance and expected outcomes of instruction.

Kinesiology involves the study of movement. Traditionally, kinesiology has involved mechanical, anatomical descriptions of movement behavior as it applies to appropriate patterns of movement based upon state of the art models at a particular time. The Individual Education Program of P.L. 94-142 requires that there be intensive study of the physical, motor and psychological prerequisites that are observable when validated against descriptive performance with purposive application to facilitate the development of each individual. Thus, the underlying processes as they relate to the acquisition of efficient movement patterns become relevant areas of study for kinesiologists in accordance with P.L. 94-142's description of the physical education curricula. There are many prerequisite abilities identified

which contribute to the development of skilled performance. It is now the job of those who work with the motor development of children to identify these deficient prerequisites which need to be fulfilled in order that target skills may be mastered by handicapped children.

Focus of the Study of Kinesiology

Instructors who work with a child for the purpose of developing motor movement must focus on several aspects simultaneously. There must be thorough analysis of those aspects of a specific motor task or skill in relationship to the learners' ability to perform the assigned tasks. Deficient prerequisites which cause problems in development must be attended to individually before the skill can be efficiently learned.

Furthermore, instructors should focus on the development of the child with regard to specific tasks. As a result of intensive study, it can be determined: 1) where a child's present level of educational performance is on a continuum of prerequisite behaviors, 2) what lower ordered behaviors have been developed that relate to the terminal task, and 3) specifically those motor patterns and performance outcomes that are to be attained as the learner advances from one stage to the next en route to mastery of the skills which are the targets of instruction. The focus of kinesiology should be directed at the desired alternation of movement which will enhance learner efficiency in the acquisition of these skills, not reproducibility of conceptual models of skills void of progressive sequences and fulfillment of prerequisites required for eventual higher ordered functioning on motor tasks.

Legal Implication of Application of Kinesiological Principles

The outcome of extensive training of handicapped children in Physical Education must be the development of physical and motor ability and skilled motor performance. The Individual Education Program (P.L. 94-142) is couched in terms of development of the child. Therefore, the present level of educational performance of a child on a given task to be attained by the learner must be known. This requires in some cases a detailed application of kinesiological principles to programming, particularly when certain related prerequisites are not present for the learner to acquire mastery of the skill. In these cases, a decision must be made, based upon kinesiological information as to which is the best alternative course of instructional action for a particular individual. Instructional attention to the prerequisites of the skill or the

participation in the skill itself is essential. Regardless of the strategy which may be employed, present levels of educational performance must be determined for each instructional goal so that short term instructional objectives can be hypothesized to enhance child development from the present levels of educational performance toward the measurable goals of the individual education program.

Task Analysis

It is desirable to match appropriate activity to specific instructional problems of specific handicapped children. This requires a task analysis of a specific skill. It is then desirable to interface the learner at his present level of educational performance with the task. There are two varying concepts of a task analysis. One has legal precedent by the courts and has subsequently been incorporated into the I.E.P. Legal implication of a task analysis implies that analysis can begin at any level, with any stated educational goal that is measurable and behaviorally defined. One simply then asks the question, "To accomplish this behavior, what prerequisite must the learner be able to perform?" For each behavior so identified, the same question is asked. Thus a hierarchy of objectives based on testable prerequisites is generated. The behavior can begin at any level and always specifies prerequisite skill and ability. The implication of this definition is that the prerequisite abilities must be identified which usually involve kinesiological observation of the child performing the task so that the appropriate programming can be employed for the learner.

The more traditional view of task analysis is a description of what the learner will do when he masters the task. In the event that there are deficient prerequisites that prevent mastery of one of the essential components of the task, judgments are often made that the learner is not ready to learn the tasks or that the task is not an appropriate instructional educational goal for a specific child. The courts have made it clear that the former procedures should be applied when applying the task analytical procedures. This means that kinesiology must prepare teachers with clinical skills to operationalize kinesiological principals into practice, to postulate sequential programming for individuals, and to identify deficiencies of particular learners.

The Need to Utilize Taxonomies to Analyze Prerequisites of Skills

The application of task analytical procedure where kinesiological principles are incorporated into programming requires the application of operational taxonomies of general prerequisite behaviors to the skills that are to be taught. Such ability prerequisites can be found in the literature on studies of factor analysis, child development, and rehabilitation. Distinct prerequisites have been defined which relate to the acquisition of motor skills. Some of the suggested literature which can be reviewed to identify motor skill prerequisites for diagnostic-remedial treatment are factor analytic studies in the field of Physical and Motor Fitness, Psychomotor Coordination, Visual Perception, Reflex Maturation and other developmental parameters in the motor sphere. Each identified pre-requisite incorporated into the observational diagnostic-remedial repertoire can lead to alternative instructional strategies for the measured ongoing development of motor skills and abilities of handicapped children.

Dance for the Handicapped

Anne Riordan, Adjunct Assistant Professor, Department of Modern Dance, University of Utah

This is a difficult question to answer with words because the medium I am comfortable with is movement — dance. The value of movement (creative movement, dance, creative dance) for everyone (child, teenager, adult) whether he or she be tall, short, light, dark, fat, thin, blind, deaf, of normal intelligence, of sub-normal intelligence, physically strong, physically handicapped, or the combination of many of the above, is almost immeasurable. I approach my students from this point of view — dance has value for everyone; the plurality or combination of handicaps may vary, which will determine the method of approach, but my philosophy remains the same.

In this manuscript I will refer to the subject as dance, and I will discuss the value of dance under several headings that I feel are important in the instruction of dance.

Teacher Qualifications

1. Understand the value of dance.
2. Understand the handicapped student.
3. Personality assets — high energy, enthusiasm, observant, involving of self and others, prepared to take risks, open to all situations, positive attitude.

These are important ingredients to the overall success of a dance program for the handicapped. The teacher must often function as a guide in choosing the appropriate mode of relating to various situations because so often for the handicapped, the behavior, energy level, and

perceptions of situations are inappropriate. The teacher must be willing to risk rejection (or what might appear as rejection) and be willing to keep trying to encourage response. The teacher sometimes needs to exaggerate his/her response and be involved in each activity in order to encourage response from the student. The teacher needs to find a balance between being an observer of the student and a participant with the student. High internal energy and enthusiasm are important to the success of the dance experience — you move with high excitement so that they may move with a little excitement. Depending on the nature of the handicap, of course, this may have to be reversed. Knowledge of individual participants is essential in directing a dance program for any group, but it is particularly important for handicapped groups.

Non-Verbal Communication

So many of the arts are non-verbal in communication, and dance is an exciting example of this. So many times the handicapped person has not developed the skills of verbal communication and is frustrated because of his inability to express himself. With dance experiences, the way is clear for his being able to "say" in movement what he cannot say in words. This is, of course, not unique to the handicapped person.

Kinesthetic Learning

Learning to move and use the body, to know the body and where it is in relation to itself and the environment is kinesthetic knowledge. I ask the question: If the handicapped student can be successful in his kinesthetic learning, why can't it be used as a bridge to his cerebral learning? (I'm not suggesting that a mentally handicapped person would become "normal" in his learning if he were taught through kinesthesis, but this method of teaching could be a way to facilitate other learning areas.) The teacher with the proper training in both kinesthetic and cerebral learning and an understanding of how his student learns can develop a bridge for more total learning.

Education and the Living Process

There are many factors, in my opinion, central to education and enrichment of lives. Five I feel to be very important are: success, involvement, meaningful information, positive reaffirmation of self-concept, and growth. With handicapped and "normal" people alike, these factors can be achieved through dance experiences.

Success

Success can be assured if the experience is within the range of possibilities for that person and is programed in a consistent way to remove most obstacles that could block success. First, you must know your student and what usually blocks his successful completion of tasks; then you plan your material to avoid these pitfalls. It all takes place in the planning and sequencing of material. Success is possible if the trust level is high and established early in the program. The attitude of the teacher should be positive, and rules should be consistent.

Involvement

The greater the involvement in a given activity, the greater the growth potential of that activity. Education for the handicapped is frequently a "closed system" with potential growth limited by the expectations imposed by the teacher. This, of course, is not only true of education for the handicapped; but because the limitations of the handicapped are so visible, the low expectations may even more severely limit growth. Involvement in an activity can provide greater growth potential than was originally predicted.

Areas of total involvement, meaningful information, growth, and success are listed below. This is not a complete list and should be considered open-ended with additions made to it by the teacher-student input.

I. Creativity Development

A. Ideas expressed and accepted
B. Discover new answers to problems
C. Movement as the medium for developing authority and leadership
D. Interpret ideas

II. Emotional Development

A. Focus and concentration (internal and external)
B. Improve self-concept
C. Accept limitations
D. Improve self-control
E. Realize acceptance of others— tolerance
F. Experience belonging
G. Feel success

III. Physical Development

A. Improve endurance
B. Improve muscle tone and flexibility
C. Increase range of motion

D. Improve coordination and balance
E. Strengthen kinesthetic awareness
F. Expand movement vocabulary
G. Approach physical daring

IV. Social Development

A. Practice using own initiative
B. Identify with peers and others
C. Explore joy of giving to a group and receiving
D. Be adequate to meet physical and social situations
E. Learn to give support
F. Accept responsibility, discipline, and work

V. Spiritual Development

A. Come closer to self (inner space)
B. Aesthetic experience for self and others
C. Transcending of self

Conceptual Approach

This area of discussion centers on my methodology of teaching all my students, whether they are "normal" or "handicapped". I would call this approach objective or non-literal. I usually begin with the body as a whole, exploring how it moves, bends, stretches, twists, and how the arms and legs move involving same and opposite movement. I then progress to moving the body through the space; how it (the body) relates to other bodies traveling through the space. This includes the shape of the body in the space, the motion and movement through space which incorporates locomotor movement. It is important in dance, as in other areas, to begin at the student's level. Energy, time, space, and weight are explored by beginning at the student's normal use of each.

Props such as a parachute or plastic sheets are used to encourage movement when sometimes there is a block of direct communication. When the body is controlling the movement of another object, often without thinking, motion of the object will carry over into the body movement.

Music is a fantastic motivator for encouraging exploration of movement. Many times the students will bring their own favorite music for the class. Then I will gradually add other music to expand this range.

This is just a short description of how I begin a dance program which has been successful for the student and for me. By helping them build their own movement vocabulary, they then can begin to create their own

movements for expressing themselves which, of course, is always successful.

Social Understanding

It is important for the handicapped to have fellowship with persons like themselves, but just as important to society and the handicapped is fellowship with persons unlike themselves. In bringing the two areas of society together, both "normal" and "handicapped" benefit in all ways — emotionally, creatively, socially, and spiritually. Through the arts these handicapped persons share and even contribute artistically with their normal counterparts. The audiences that have shared in watching and participating with my handicapped adults have been very enthusiastic and have felt spiritually enriched by the experience. Handicapped persons need exposure directed toward their areas of strength in order to be understood and appreciated by society. They truly have value.

Through dance experiences the student can develop emotionally by improving his self-concept, learning to accept his limitations and achieve his potential, improving his self-control, learning the feeling of acceptance and the accepting of others, experiencing belonging to a group, and enjoying success. A person's level of social development is interrelated with and partially dependent upon his physical development and activity. The classroom setting provides a laboratory in which students have social interaction experiences. In a safe setting they can be encouraged to try new behavior patterns. Dance provides them with a means of expression in an environment in which they learn to accept responsibility and discipline. Dance can help the person develop his ability to work, share, and relate with others. At the same time, he can be developing acceptable social habits and attitudes.

Each of the five areas of development — physical, social, emotional, creative, and spiritual — is dependent upon and interrelated with each of the others. The student grows and develops as a total unit; therefore, one area cannot be affected without having an effect upon the other areas. As a student's needs are met in one area and his development in that area progresses, his total development is enriched.

Physically Handicapped in the Regular Class: Elementary Adapted Physical Education and Hospital Physical Therapy

Vicki Powell, Adaptive Physical Education Resource Teacher, San Bernardino City Schools

Elementary physical education, especially for children with physical problems, has not always been of the best quality. Five years ago the San Bernardino City Schools in cooperation with San Bernardino Community Hospital, set out to improve this situation for our school children.

The great number of asthmatic children in our schools led to a strong emphasis on this impairment. Because of the concern for children with breathing problems, a local allergist and the Director of Rehabilitation Services at the Hospital made it possible for the City Schools to contract with the Hospital's Physical Therapy Department for services.

The arrangement gives the schools daily use of the physical therapy facility, exercise room, therapy swimming pool and locker rooms plus the services of one physical therapist for one hour per day. The school district provides an Adapted Physical Education Teacher and an aide as well as transportation for the children to and from their schools. The hospital therapy takes place every weekday afternoon during school hours throughout the regular school year.

In addition to the hospital services, the school district also provides weekly Adapted Physical Education classes at each elementary school. This provides a follow-up to the hospital therapy in addition to activities and games designed to improve each child's physical well-being and motor skills that enable the children to participate more fully in all areas of physical activity.

Four main areas of concentration are dealt with in the A.P.E./Therapy program: Physical fitness, motor skills, self concept and knowledge of the child's physical impairment.

An itinerant Adapted P.E. teacher and aide travel to different elementary schools each morning working with small groups of identified children. The groups range in size from about five to twenty students. An exercise program is worked out for the students and they spend approximately one-half hour exercising. The remaining half-hour is used for a variety of activities, including a discussion and lesson on a particular impairment, different perceptual-motor activities, or a lesson focusing on a particular sports skill.

Asthma and breathing problems receive a great deal of our attention. Special breathing exercises are stressed with all children as well as relaxation techniques and posture conditioning. After at least a year in the program the children are quite knowledgeable about diaphragmatic breathing and how they can use it to improve their own breathing. We also see a conscious improvement in standing posture among the children.

The afternoon Physical Therapy Program serves approximately twenty students each day in a group therapy session. The Hospital Physical Therapist assigned to the children is responsible for planning the therapy hour. Together with the A.P.E. Teacher they implement an exercise and swimming program with the children.

Each day the children are divided into two sub-groups, one in the exercise room, the other in the indoor therapy pool. The Therapist works in the exercise room leading the children in a variety of exercise and movement activities. The A.P.E. Teacher works with the children in the pool area. Special exercises and games as well as swimming instruction are offered here. These groups participate for about one-half hour before the two groups of children exchange areas and work for another half hour. Different groups of twenty children participate each weekday so that any one group comes to the hospital once a week.

The Hospital Program is run on a semester basis and the groups change at mid-year so all children in the program will have the opportunity to participate in the Hospital Therapy for at least one semester per year. An evening open house for parents is offered during the year so that parents may see what their children are involved in. Parents are welcome and visit the afternoon therapy sessions at their convenience. At the close of each semester parent conferences are offered for parents to review the child's progress and determine if he/she should continue in the program.

Our evaluation procedures for the program include physical fitness and motor skills testing, and self-concept ratings at the school sites. At the Hospital site each child is pre- and post-tested in five areas of pulmonary function and in standing posture.

Throughout the program we deal with a variety of impairments such as obesity, heart conditions, motor incoordination, orthopedic problems, epilepsy, diabetes, as well as the many allergy and breathing problems that our children experience.

In most cases our children have shown good growth in the four main areas of concentration. Many have been able to move into regular Physical Education classes at the Junior High School level. Others obtain a good background that enables them to move into daily adapted P.E. classes at the secondary level where they are expected to be physically active.

A Sound and Movement Workshop/Demonstration with Theatre Unlimited

Randy McCommons, Brin Quell, Music/Drama Specialist,
Recreation Center for Handicapped, San Francisco

Theatre Unlimited is a special project of the Recreation Center for the Handicapped and the National Committee Arts for the Handicapped. We are an ensemble theatre company comprised of able and developmentally disabled actors.

Our approach, called Developmental Theatre, is based on group processes which emphasize each individual's resources. This involves a blending of structural and improvisational open-ended experiences.

Our structural activities include a warm-up series with emphasis on body part isolations, balance, coordination, and "energizing". We draw from yoga exercises for further development of fluidity and concentration in movement. On partnered work, we utilize such theatrical techniques as: 1) mirrors, 2) slow motion games, 3) support and trust exercises, 4) sounding exercises — i.e. echoing, gibberish and chanting, 5) contact improvisation, 6) counted moves which emphasize building elements of sound and movement into a sequence with counts.

We devote some rehearsal time to pure improvisation with recorded music to serve as motivation and inspiration. This time gives us all an opportunity for personal involvement with each member of the group and to explore our resources in movement, sounding, characterization, and creating spontaneous scenes.

During the first year of Theatre Unlimited, we developed a process of

"scoring" which proved to be an effective and exciting tool for the creation of dramatic material for performance. Simply, a score is an outline that describes a sequence of tasks, statements or events relating to a central and clearly defined theme. A score can be designed by one person or many. In Theatre Unlimited, we take turns developing scores and directing them. In addition, we emphasize that members can exchange roles in a score. This demands a greater responsibility from every actor to be aware of the total performance. It assumes a higher degree of flexibility to be ready for changes within each rehearsal for a performance. A primary benefit of this kind of work process is that it allows the option of adding new elements to a score. The scores are then a natural extension of the techniques and exercises we use in rehearsal. The elements of performance become an integral part of every rehearsal.

Obstacle Course Relays — A Tool to Remediate Sensory Motor Deficits

Tom Marsh, Physical Education Instructor, Bruce Thiele, Psychomotor Specialist, Sally Warner, Recreational Therapist, The Devereux Foundation, Santa Barbara

The Devereux Test of Extremity Coordination (DTEC) measures four internal aspects of coordination: sequential motor ability; static balance; fine motor ability and perceptual motor ability (ability to receive, integrate and react to stimuli.)[1] The DTEC is administered on a one-to-one basis, evaluates the child's performance and remedial activities recommended (see attached sample evaluation).

Once a week the students participate in obstacle course relays as a part of their physical education program. The relays were devised as a tool to remediate motor-perceptual deficits in a structured, challenging and enjoyable activity. They also provide an effective method for developing leadership skills. One of their greatest assets is that they require and encourage communication and cooperative teamwork.

An important characteristic of the activity is its flexibility. It may be adjusted in simplicity or complexity to any ability level. Students of various ages and skill levels can participate together. The obstacle course may be run individually, against one challenger, against the clock, or as a team activity. In most cases the younger and more severely handicapped students respond best to races against the clock or one challenger. The older and/or more capable students are more motivated by the competitive team relay.

130

Layout of Obstacle Course

Two courses are set up with 3-8 different stations which direct the students to the end of the field or gym and back down the center to their starting point. The courses are identical, except that a station or activity approached from the right on course A, will be approached from the left on course B (see attached sample relays). (The students run both courses.) Each obstacle course includes stations with activities that develop both gross and fine motor skills. Three or four races are run per class period, increasing in degree of difficulty as a new task is added after each race. The variety of tasks at the stations in limited only by one's imagination, but often involve skills learned in P.E. class on other days of the week. (See attached example of obstacle course relays.)

Choosing Teams

The teacher chooses two student captains. The captains then choose teams. Teams must have an equal number of students.

Instructions for Races

Instructions are given by the teacher to the captains *only*, before the start of each race. The captains in turn convey the instructions to their team. If a student has a question, he/she must ask the captain, who may consult the instructor. There is a time limit for teams to receive instructions and prepare to start the relay. Points may be given to the first team ready to begin.

Start of the Relay

The students on each team line up at their starting line, one behind the other with legs apart. After the instructor signals the start of the race, an object to be used on the obstacle course (ball, scooterboard, beanbag, etc.) is passed to the end of the line between the legs of the players. The *last* player in line negotiates the obstacle course *first*, after receiving the object. After the student has completed the assigned tasks on the obstacle course, he/she returns to the front of the line and passes the same object to the next player at the end of the line. It is important for the teammates to keep their line straight and be ready for the returning player.

Finish of Relay

Before the start of the relay, the student on each team assigned to go

first is instructed to perform a special finishing task *after* all the team members (including he/she) has run the race. The task should be exacting, conclusive and have a high degree of difficulty (within the range of student's ability). This makes the race more exciting for the students, often allows the team which is behind to catch up, and makes it easy to determine the team finishing first.

Scoring

The students' motivation usually increases when points are scored and the winning team is determined by a cumulative score at the end of class. We assign a point value to each race, which is doubled for the following relays (first relay — 5 points, second — 10, third — 20, fourth — 40). A team's score may be increased by individual players earning points for successfully completing tasks in the obstacle course. For example, if the task is to throw 4 bean bags into a pail, one point may be scored for each bean bag making the target, or there may be two targets set up, one more difficult to hit than the other, with a greater point value assigned to the more difficult target. Another method to score points is to give the student on the obstacle course 3 opportunities to successfully complete a task (i.e. ring toss, shoot basket, etc.). If successful on first attempt, score 15; on second attempt, score 10; third, score 5. A running score is kept for the two teams only, not for individual students.

Basic Basketball

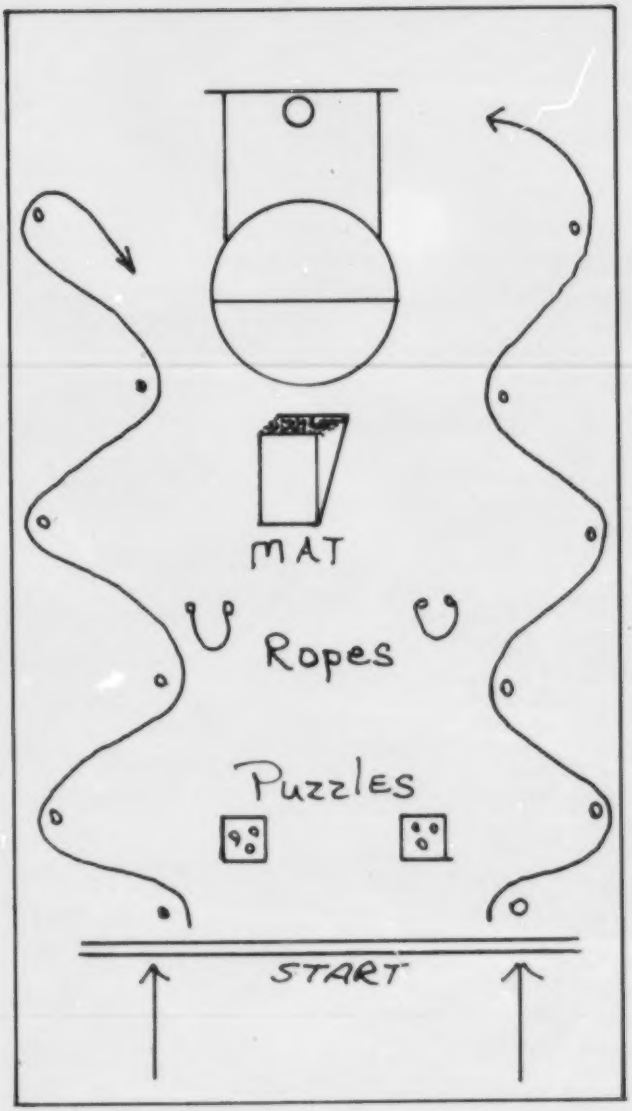
Equipment: Twelve 24" cones, 2 volleyballs, 1 incline mat, 2 jumpropes, 10 nuts & bolts.

Sequence: 1) While holding ball, run in & out of the cones down & back (5 pts); 2) Run down holding ball (as in no. 1), run to incline mat & do a somersault (10 pts); 3) Same as no. 2. After somersault run to jumprope, put v.b. between knees and jump 5 times (20 pts); 4) Same as no. 3. After jumping rope go to table. 1st player take nuts & washers off bolts (2nd player puts them on, etc.) (40 pts); 5) Begin as in no. 1. Go to basket. Shoot 3 times. (1 pt. for each successful basket) Run back to line. Finishing task: run straight to basket & shoot.

Objectives: Develops balance, ability to change direction, figure-ground discrimination, spatial organization.

Level: Jr. & Sr. High

1. George DeHaven P.T., James Bruce, M.S. *Individual Motor Achievement Guided Education*, Devereux Foundation, Devon, Pa. 1973, p. 8.


MAT
Ropes
Puzzles
START

THE IMAGE MANUAL AT A GLANCE

The following sample of the IMAGE Manual affords a capsule view of the Devereux IMAGE program and attests to the simplicity of its implementation.

STEP I

ASSESSMENT: TESTING AND SCORING PROCEDURES

SAMPLE SCORE SHEET

DEVEREUX TEST OF EXTREMITY COORDINATION — FORM C

Name: Mary Doe Date: 2/23/73

Age: 4.3 Sex: M. ___ F V School: Devereux Examiner: K. Hansen

Preferred Hand: Right

Tasks			Item Score	Subcategory Totals
1. Alternate finger to nose	R 3 10 sec.	L 2 10 sec.	1 5	A. Sequential Motor Activity
2. Opposition	R 13 10 sec.	L 13 10 sec.	2 26	3 38
3. Pronation-supronation	RO 7 10 sec.	LO 6 10 sec.		6 5
	RC 6 10 sec.	LC 5 10 sec.		7 6
	R&LO 8 10 sec.			ST 49
	R&LC 6 10 sec.		3 38	B. Fine Motor Ability
4. Patting	R 14 10 sec.	L 11 10 sec.	4 25	
5. Foot patting	R 16 10 sec.	L 8 10 sec.	5 24	2 26
6. Heel-toe tapping	R 3 10 sec.	L 2 10 sec.	6 5	4 25
7. Finger wiggle	R 3 10 sec.	L 3 10 sec.		5 24
	Rev.	Rev.	7 6	8 80
8. Finger tapping	a. R 24 10 sec.	L 20 10 sec.		St 155
	b. R 20 10 sec.	L 16 10 sec.	8 80	C. Static Balance
9. Alternate heel-to-knee, heel-to-toe	R 3 10 sec.	L 2 10 sec.	9 5	10 12
10. Modified station	O 5 sec.	C 7 sec.	10 12	11 17
11. One-leg stand	RO 6 sec.	LO 3 sec.		ST 29
	RC 4 sec.	LC 4 sec.	11 17	D. Perceptual Motor Activity
12. Heel-toe walking	O 3 steps/ 5 sec.	Lost Balance		1 5
	O 4 steps/ 5 sec.	Lost Balance	12 7	9 5
				12 7
				ST 17
				TOTAL DTEC SCORE (A, B, C & D) 250

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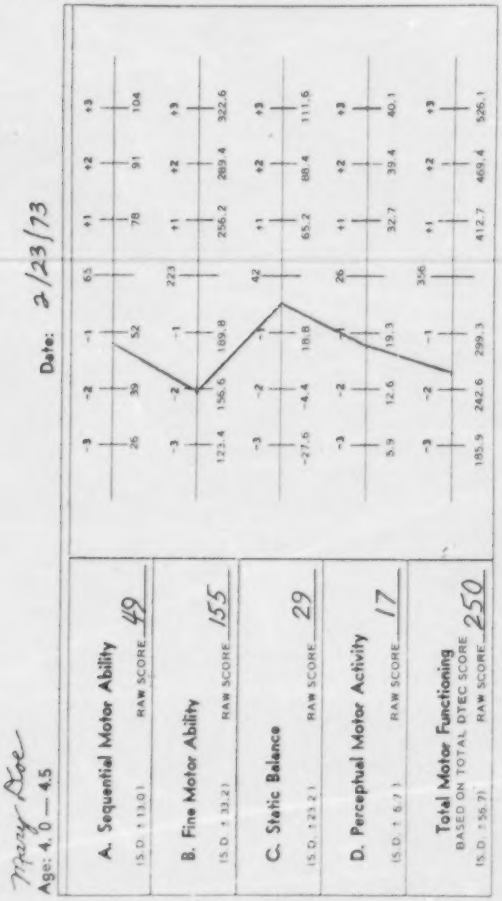
STEP 2
Following the DTEC Test, the teacher plots Mary's scores on the IMAGE Profile appropriate to her age range. The IMAGE Profiles range in age from 4.0 to 10.11 and are included in the total IMAGE package. The scores on the IMAGE Profile determine a child's program placement based on the number of standard deviations below the mean for her age level.

THE IMAGE PROFILE
Each calibration represents one standard deviation.


Mary Doe
Age: 4.0 — 4.5
Date: 2/23/73
A. Sequential Motor Ability
(S.D. ± 13.01)
RAW SCORE 49
B. Fine Motor Ability
(S.D. ± 33.21)
RAW SCORE 155
C. Static Balance
(S.D. ± 23.21)
RAW SCORE 29
D. Perceptual Motor Activity
(S.D. ± 6.71)
RAW SCORE 17
Total Motor Functioning
BASED ON TOTAL DTEC SCORE
(S.D. ± 56.71)
RAW SCORE 250
-3 -2 -1 65 +1 +2 +3
26 39 52 78 91 104
-3 -2 -1 223 +1 +2 +3
123.4 156.6 189.8 256.2 289.4 322.6
-3 -2 -1 42 +1 +2 +3
-27.6 -4.4 18.8 65.2 88.4 111.6
-3 -2 -1 26 +1 +2 +3
5.9 12.6 19.3 32.7 39.4 40.1
-3 -2 -1 356 +1 +2 +3
185.9 242.6 299.3 412.7 469.4 526.1

Statistical tables included in the IMAGE Manual are the sources from which the IMAGE Profiles were developed and provide additional verification of means and standard deviations of a typical population sample of public school children.

Minimal Brain Dysfunction — Birth Weight, Physical Size, Stigmata, Bone Age — The Effect of Drugs on Growth

Leon Oettinger, Jr., M.D., Associate Clinical Professor, Pediatrics, University of California, Los Angeles

Children diagnosed as minimal brain dysfunction are, as a group, different from normal children. The differences are, in general, however, not those that one would expect.

One of the most cherished concepts about hyperactive children is that there is an increase in prematurity, a decrease in size, and an increase in maternal complications. These conclusions have been based on research (done primarily on clinic patients) which was not controlled as rigidly nor as adequately analyzed as would be the case today. A recent review has shown that there is however a marked discrepancy in birth size when related to socioeconomic class. A group of male children evaluated for a long term drug study at UCLA* were compared with a group of private patients evaluated for the same type of project and to the State of California birth weights of white, non-Spanish-surnamed male children. Results are shown in Table I.

Hyperactive Behavior Syndrome: Birth Weights

	*Controls**	*UCLA*	*Private Practice*
Number	582,324	84	203
Average	3,409	3,193	3,444
S.D.	753	562	518
Range	1,162-6,237		1,531-4,905

Controls vs. UCLA $p \leq .01$
Controls vs. private patients N.S.
UCLA vs. private patients $p \leq .01$

As can be seen there is a marked difference in the birth weights of the clinic patients and the private patients. This suggests, but does not prove, that the research on which we base our concepts of birth size and maternal complication was and is misleading due to the utilization of a poor selection of subjects without sufficient discrimination or description. At present work is in progress to obtain control groups at various socioeconomic levels so that children can be compared to their peers. One other factor must now be considered. Between 1966-1970 and 1970-1974 there was an increase of 50 G. in the birth weight of Californian children, so appropriate time scales must also be used.

The physical size of MBD children (particularly height) is also moot in this context. Safer et al. (1972-1973) reported that the MBD children they studied were above average in height. These observations were based on school records. Oettinger et al. in a more tightly controlled study where all of the patients were measured by one person found that MBD children were shorter than the national average to a significant degree. Here again peer groups were not available for either group so the conclusions are inferences and not proven. In a review by Roche et al. (1978) it was concluded that there was no significant difference between MBDs and normals.

Oettinger et al. also found that bone age was significantly reduced in children with MBD. This was true even though there was no defect in thyroid metabolis. There are present at least five other studies which have shown bony immaturity to be related to learning and reading problems.

The effect of drugs on growth and on bone maturation is an area where controversy abounds. Safer et al. (1972, 1973) reported that there was a significant loss in growth velocity when children were treated with stimulant drugs. A number of other studies have been done since then which disagree. Oettinger et al., McNutt et al., Quinn and Rapoport all

found that this was not the case. In a multi-clinic study with pemoline, Page et al. showed that growth velocity decreased for a short period of time but then increased and that the child soon returned to the level of growth at which he started. Safer et al. also found that if the stimulant drugs were stopped there was a growth rebound and normal rates were resumed. In the longest study to date Oettinger et al. studied 25 boys who had been on medication for prolonged periods and who were all more than 17.5 years of age (Table 2). As can be seen these boys were actually somewhat taller than would have been predicted from their original heights before treatment. It is not believed that stimulant drugs stimulate growth although this theory has been advanced by Millichap. It is believed that the boys as a group were immature and that they had finally matured to the level of their peers.

TABLE II – DISTRIBUTION OF RELATIVE CHANGES IN HEIGHT

Relative Change in Height (CM)	N	%
> -10.0	2	8
-10.0 to -5.0	2	8
- 5.0 to -0.1	8	32
+ 0.1 to +5.0	6	24
+ 5.1 to +10.0	4	16
> +10.1	3	12

*Mean ± S.E. 1.0 ± 1.5. Range -14.3 to 16.9 cm.

The presence of minor physical anomalies in children with MBD was first reported by Waldrop et al. in 1968, although Downs in 1866 found that some retardates had abnormal physical (Mongoloid) features. Since the original description Waldrop et al. have shown that there are increased stigmata such as abnormal placement and shape of ears, high palates, hyperteliorism, abnormal head size, etc. (see chart) in children and showed that when first grade children were evaluated and then checked at the end of the year they had predicted 90% of those who "flunked" first grade.

Oettinger and Evans used 41 hyperactive children matched with 41 controls for age, sex, intelligence and socioeconomic group. All of the MBD children had significant stigmata counts while only 5 of the 41 controls did. This was significant at the .01 level. Oettinger and Evans and Oettinger and Harris (1978) also evaluated stigmata counts in the family of probands. Evans and Oettinger found that 31/46 families had other members of the families involved while Oettinger and Harris

ANOMALIES

Head
Head circumference out of normal range:
For each age level > 1.5 S.D. 2 _____
> 1.0 S.D. ≤ 1.5 S.D. 1 _____

Electric Hair
Very fine hair that won't comb down 2 _____
Fine hair that is soon awry after combing 1 _____

Eyes
Epicanthus
Where upper and lower lids join the nose, point of union is:
Deeply covered 2 _____
Partly covered 1 _____

Hypertelíorism
Approximate distance between tear ducts:
≤ 1.5 inches 2 _____
> 1.25 < 1.5 inches 1 _____

Ears
Los seated:
Bottom of ears in line with:
Mouth or lower 2 _____
Area between mouth and nose 1 _____
Adherent Lobes:
Lower edges of ears extend:
Upward and back toward crown of head 2 _____
Straight back toward rear of neck 1 _____
Malformed ears 1 _____
Asymmetrical ears 1 _____

Mouth
High palate:
Roof of mouth:
Definitely steepled 2 _____
Flat and narrow at the top 1 _____
Furrowed tongue (one with deep ridges) 1 _____

Hands
Fifth finger:
Markedly curved inward toward other fingers 2 _____
Slightly curved toward other fingers 1 _____
Single transverse palmar crease 1 _____

Feet
Third toe:
Definitely longer than second toe 2 _____
Appears equal in length to second toe 1 _____
Partial syndactylia of two middle toes 1 _____
Gap between first and second toe (approx. ≤ ¼inch) 1 _____

found a slightly higher percentage since they did complete family studies. This evidence that there is a strong genetic component verifies the conclusion of the early workers in the field of learning disorders that about 70% of learning disorders were genetic in origin.

Although much of this data may be surprising it should not be. Hyperactivity was well described in 1844 by Hans Hoffman and in 1902 Still commented on the problems following encephalitis and also noted

that many "psychical" problems he saw were probably genetic in origin. Lashley showed in 1917 that stimulant drugs could help learning in sub human species while Bradley in one article and Eccles and Molitch in another in the same journal reported that amphetamines helped behavioral disorders and improved intellectual function. This was 1937 which antedates sulfa, antibiotics, and other specific drug therapies.

There is much yet to learn but there is much in the literature which has been ignored or misinterpreted.

In-Service for Rural Areas — Idaho

Ernest K. Lange, Associate Professor of Physical Education and Special Education, University of Idaho

General

The University of Idaho received a Bureau of Education for the Handicapped Training Grant to begin a two-component effort in preparing and upgrading teacher activities in providing physical education to special populations. One component is to develop a pre-service master's level program on campus; the other provides in-service activities throughout the state to teachers in physical education and special education.

In-Service Planning

The in-service element has been devised on a three phase basis. Prior to the selection of activities and formulating a plan for action there was a needs assessment conducted in conjunction with teachers in the state. The needs assessment conducted by school districts resulted in prioritizing needs as expressed by teachers. This led to a Special Study Institute which was conducted in May, 1977 in Boise. Following the Special Study Institute in Physical Education for the Handicapped, a survey was disseminated to learn in which areas teachers felt they needed in-service training. The assessment requested information sufficient in determining (1) which teachers needed services, (2) what their teaching responsibilities were, (3) specification of certification area, (4) perceived in-service needs, (5) child study team participation, (6) availability of

school resource personnel, (7) areas indicated as greatest importance to the teacher in upgrading skills.

State Education Department Cooperation

State Department of Education involvement was established through the participation of the two consultants for special education and physical education. These two individuals were actively engaged with the in-service plans from the initial stage. Between them they assisted with the formulation and mailing of the needs assessment, arranged facility availability, and participated in the workshops.

Implementation

Following a review of teacher responses a plan of action was formulated. The intent was to reach as many teachers as possible with the activities felt most appropriate to meet their needs, as expressed by the teachers and interpreted by workshop personnel. Operational objectives were established with the recommendation of workshop presenters, based upon the needs expressed. The conclusion was drawn that the best approach would be that which steadily increased the number of involved teachers whilst keeping travel inconvenience to a minimum. Consequently, seven sites were selected at appropriate points around the state so as to serve the largest population possible. Each site utilized a local college or university for its workshop.

The basic goals established were two-fold: (1) to provide the greatest number of teachers possible with a minimum of foundational information relative to physical education for special education youngsters; (2) to initiate a more comprehensive plan of action for provision of appropriate physical education, in spite of existing or non-existing conditions.

Not an insignificant aspect of the procedure was the desire to effectively influence the attitudinal outlooks of teachers in their perceptions of handicapping conditions and the nuances of physical education, special education, and their association within Public Law 94-142.

A basic three phase plan of action was arranged:

Phase I (Year I): Workshops at seven sites in Idaho (Spring, 1978), Summer intensive workshop on campus (Summer, 1978), Talent Bank Consultants Pool (School Year, 1978-79).

Phase II (Year II): Continuation of workshops at locations other than those utilized in Phase I (Spring, 1979), Summer administrative workshop on University of Idaho campus (Summer, 1980), Talent Bank Consultant Pool (1979-80 school year).

Phase III (Year III): Workshops throughout the state by demand addressing regular educators (Spring, 1980), Summer coursework for all personnel from Phases I and II (Summer School, 1980), Talent Bank Consultant Expansion (1980-81 School Year).

Personnel

Workshop personnel consisted of in-state university faculty, state department of education members, and visiting faculty from regional universities. Specifically, the presentations were assigned by topic to the consultants to the Idaho State Department of Education and Physical Education; a physical educator from Oregon State University; a special educator from Portland State University; a joint appointee from the University of Idaho in Special Education and Physical Education. These individuals met briefly the evening prior to the workshop and followed the day's presentations with a discussion preceding their return to their respective homes. Additional alternations in programming or planning occurred via telephone conversations and mail.

The selection of dates and workshop sites was made following adjustments for scheduling of public school calendars, presenter commitments and responsibilities, convention schedules, and other influences. Subsequent to such considerations an agreeable reasonable calendar of workshops was solidified.

Information Discussed

Workshop topics related to the established needs explained by teachers as well as the anticipated necessary information provided by the presenters. This approach assured the most appropriate content through utilizing the strengths of the discussants in satisfying the basic concerns expressed by teachers.

Each workshop opened with an awareness survey regarding the general topics to be discussed. An indication of the teachers' awareness was also provided. Following the survey was a general discussion of P.L. 94-142 and its origination, intent and impact. Other topical areas were: Physical education, P.L. 94-142 and programming.

Assessment procedures and considerations,
Relationship between special education and physical education,
Classroom Management,
Task analysis,
Child Study Team function, and
Evaluation of proceedings.

Evaluation

The evaluation portion served two purposes. Primarily, information was fed back from participants to presenters regarding the appropriateness and effectiveness of recently completed activities. Secondly, the interpretation of teacher reaction was used by presenters in critique of themselves and each other leading to more effective operation of ensuing workshops.

Evaluation content considered the impact of the most important elements included in the proceedings. The teacher anticipation of the impact on their individual situations, as the teachers perceived it, was weighed heavily. Recommendations for improvement were made by the teachers for the benefit of other teachers in later workshops.

Site Selection

Workshop sites were selected to coincide with the population distribution throughout Idaho. This resulted in the bulk of the workshops being conducted in the southern part of the state in an east to west direction. Five workshops were held in Rexburg, Twin Falls, Pocatello, Boise and Nampa and two in the northern portion of the state at Moscow and Coeur d'Alene.

Impact

Considering the rural population distribution, the impact of the workshops on school personnel was quite successful. Teachers had the opportunity to receive instructional presentations from a variety of personnel without traveling excessive distances or being inordinately inconvenienced. Additionally, many students, administrators, aides, and parents were able to attend the meetings. The total impact will never be accurately recorded; however, over 240 individuals participated in the various workshops.

Value

Obviously, with the availability of teacher-training workshop activities, and considering the influence these teachers will have in the schools, the school children are the potential recipients of increasingly appropriate and valuable educational experiences. The physical education element of the total curriculum provided the special education student will expand in scope to reach more students with greater effect.

In addition to student advantage there is an opportunity from such inservice activities to increase the professional awareness of teachers. Administrative personnel have the chance to expand their understanding of physical education needs and special services pertaining to children with necessities peculiar to their conditions.

Regular educators have the opportunity to become more knowledgeable and understanding of the curricular distinctiveness required by the handicapped. Professionals in other areas, through expansion of their educational expertise, can become more effective teachers, as well as assume advocate roles for special student curricular needs.

Faculty from colleges and universities will become more aware of the need for alterations of curricula which will be necessitated in meeting the preparation requirements of undergraduate students. Rather than attempting to "catch-up" with teacher in-services suitably adapted programs can only make for more appropriate undergraduate preparation.

Summary

Following the screening of teacher needs in physical education services for special populations, and the arrangement of a special study institute, both pre-service and in-service experiences were arranged for teachers in rural areas of Idaho. A three phase program was formulated. It was established on a three year basis to provide a series of workshops for special educators, physical educators, and regular classroom teachers and administrative personnel.

Presenters represented the State Department of Education, professors from Oregon institutions of higher education, and a faculty member from the University of Idaho. Sites were selected at seven areas around the state.

Workshops were presented in such a way as to meet the maximum number of teacher needs as indicated by a needs assessment.

The impact and value of the procedures have proven extremely successful in the first year of the three year plan. Indications for continued success are strongly exhibited.

Observations

There is an urgent necessity throughout the United States for teachers and schools to be more responsive toward programs for the physical education of handicapped children. Through the procedures established and applied in Idaho an attempt has been made to meet these needs, seemingly with a strong measure of success.

Continued effort will be necessary to make these services available to teachers nationally. States have similar opportunities for teacher skill upgrading on which they can capitalize. The Idaho approach in this area may prove advantageous for other states.

Teacher needs in the understanding of Public Law 94-142, inappropriate certification requirements in special physical education, and minimal parental consciousness of the law, physical education, and the schools suggest a great urgency for continued efforts in these areas.

Overcoming these difficulties requires continued involvement of state department personnel and the use of regional experts. Teachers can assist in the implementation of and be advocates for physical education services for handicapped youngsters.

Assistance from the Bureau of Education for the Handicapped has been invaluable in initiating service activities and will be necessary if the process is to prevail.

The legislation exists, and children are profiting. Educators at all levels must continue their efforts if the services are to enhance the richness of life and influence the educational experiences of special students.

The Heartbreak of Kickball, Dodgeball and Drop the Hankie — Elementary School Physical Education: The Bases for the Basics

Rudy Benton, Elementary School Physical Education Specialist, Burlingame School District

Try Being Creative . . . It Might Work!

One of the stated objectives physical educators have always championed is helping to develop a creative person. This is as it should be. I offer a suggestion I hope will effect the following: 1) Give a shot in the arm to your program. 2) Exercise the creative muscle of both the instructor and students.

Take one day a week when you try something you have never tried before in your physical education class. Use movement, music, and total involvement as the key features. I would advise not making this new activity just another game. I try to introduce a new activity, which acts as a catalyst for movement, or a stimulus for fun and excitement every Friday (Grade Level K-6). The following are just a few of the ideas or catalysts that have been used.

1. Everyone with a ping-pong paddle and ball.
2. All with a rug sample (approximately 6" x 12").
3. Each student with a sheet of newspaper.
4. Pencils — one per student.

5. Clothes hangers.
6. Baseball bats (plastic or wooden).
7. Cotton.

The majority of catalysts can be very inexpensive and with proper direction on your part, can produce movement which activates both the small and large muscles of the body.

Here are examples of the types of challenges that can lead to thinking, creating and movement with pencils: Each student creates an exercise to music or can follow you as you create movement to any music that makes you move. (Try Bette Midler's "Boogie Woogie Bugle Boy" or Jim Croce's "Bad, Bad Leroy Brown.") Then, have them try to manipulate the pencil with their fingers. Start with index fingers only and then move the pencil to the other fingers using only your fingers. Pretend the pencil is a 700 lb. weight, lift it, and after reaching the top of the lift, collapse to the ground. Ask each student to walk like a very old person using the pencil as a cane. Drop the pencil, eraser-end down, and catch it on the rebound. Skip around the room (to music) while twirling the pencil as if it were a baton. Ask students to think of a funny way to carry the pencil or to create movement with music using the pencil as the focus for action.

Possible movements are endless. All this and more with just a pencil. In the February 1973 issue of Movement Education another example with cups of water is described. Your creative mind can add new color to your program.

If you would like other ideas or catalysts for movement, I would be glad to share them with you, plus suggested challenges, but thinking up your own ideas can be quite rewarding. Good luck!

Star Wars — Revisited

Taking advantage of the "Star Wars" movie popularity can add another dimension to your moving and learning program. Take, for instance, the "Star Wars" obstacle course. "May the course be with you." A long time ago in a school far, far away the physical education instructor designed a galactic experience (or obstacle) course prepared to stimulate both minds and muscles. A week in advance the students (K-6) were notified that on a certain date there would be the "Star Wars" obstacle course. On that day they could choose to wear their "Star Wars" shirts, bring in any souvenir items, such as books, posters, buttons, etc. to be included as part of the course.

On the day of the "Star Wars" obstacle course, our multi-purpose (or muscle-purpose) room looked very colorful with "Star Wars" pictures on the walls and approximately twenty obstacle stations. A table called the "Rebel Reading Center" held all the items that the students brought in. A sign held up by a music stand identified each station of the obstacle. The sign was in color with a picture depicting a scene from the movie. Each sign was a laminated 11 x 14 inch card. Scenes for the signs came from both the "Star Wars" calendar and various "Star Wars" magazines.

The result of the colorful design of the course was an additional motivational tool to get students moving many muscles in many different ways. Participants had to remember the path of the course, respect the right-of-way of others, play act scenes from the movie, pace themselves to see how many times they could get through the galaxy experience, move in time to music, be aware of their body in space, remember what to do at each station, respect safety aspects and the condition/position of equipment, and be aware of others who might be having difficulty and assist them when necessary.

Here is a description of some of our stations:

Robot Lane: Ten traffic cones in a small area. Walk robot-like through the cone area as if computerized without touching the cones.

Robot Malfunction Center: After going through the cone field, the robot falls down and is forced to fix himself by adjusting the knees, hip joints, shoulders, etc. before proceeding to the next station.

Lothe Bantha Walk (An elephant-like creature): Walk slowly on all fours in a designated area on the way to the next challenge.

Get Through the Death Rays: Several chairs with ropes tied between them. Students step through a maze of ropes without touching them. The ropes represent the death rays.

Storm Troopers-Duck for Cover: Tumbling mats. Actors fall and roll and twist as if dodging the shots from a ray gun.

Garbage Compact Area: 30-40 aluminum soda cans in an outside area. Crush at least 3 cans before advancing to the next area.

Do the Jaw Walk: Walk as a very small person might walk the length of any designated area.

Monsters Playing Chess: Approximately 6-10 automobile or bicycle tires. Jump from tire to tire as if the student was a monster chess piece acting out the manner in which a monster might make the jumps.

Cantina Monsters: When arriving near the phonograph, which is playing

"Star Wars" music, act out how monsters would be playing instruments in a monster band.

Death Star Leap: Leaping from a designated line to a landing pit or soft landing area.

Light Sabre Action: At this station, pretend you have a light sabre in your hand (sword) and strike it downwards ten times.

Jump the Giant Band Worm: Using a table, stegel, or Lind climber with a mat draped over it, each class member vaults over as if it were a giant worm.

Flying Fighters: Students had to fall off the stage as if they were Rebel Fighters being shot down in their planes while landing on mats or other soft surfaces.

Rude the Land Speeder: At a certain point in the course, there are about 15 scooter boards parked by a wall. Each student rides one around two cones and returns to replace the scooter to its original position.

Death Star Ledge: The stegel now becomes the Death Star Planet. Walking across the balance beam(s) representing the ledge that Alec Guinness walked on and climbing the ladder to the top of the stegel represented the conquering of the Death Star. Once on top, students would then slide down to the mat and continue their journey through the galaxy.

Rebel Reading Center: As students passed these tables, they were to LOOK at the sourvenir items brought in by other classmates.

To begin the action of the course, each student found his own place in the galaxy and started from that spot. The challenge was to see how many times they could get through the course with quality space travel. Travelers were also told to avoid any obstacle that might have a waiting line. Simply skip it and get through it the next time around.

The "Star Wars" obstacle course worked well with all grades. The kindergartners, rather than remembering all of the path directions, simply went to a station until a signal and then they would move to another area. For the kindergartners, it was the "Star Wars" experience course.

The course was designed so that no one had to have seen the movie. The actions at each station were quite self-explanatory. The newspaper was notified and parents and administrators were invited to attend.

Good luck on your course design. Warning: the students' excitement for moving may be contagious. "May the Hustle be with you."

Jazzercise — A Participatory Session

Judi Sheppard Missett, Director of Jazzercise, Carlsbad, California

Jazzercise is a fun way to fitness — a unique approach to body conditioning using joyful jazz dance movements and swinging music. It is a wild and woolly workout that conditions the body and lifts the spirits. Each class participant bounces to a "boogie beat" in a planned rhythmical manner both physically and musically.

Underneath the fun and music, the point of a Jazzercise class is cardio-vascular, muscular, metabolic, and emotional improvement. Balance, coordination, flexibility, muscle tone, stamina and posture are the areas on which Jazzercise concentrates. There is bending, stretching, jumping and dancing, built around warm-up, peak-work, and cool-down periods.

The routines are composed of dance movements that anyone can do and that have been set to the flow of selected happy music from "rock to ragtime." It is a creative arrangement of steps, moves, stretches and transitions. These have all been matched to fit specific music for specific purposes, each routine designed to improve the body with total fitness in mind. The movements create a routine of physical expression.

Jazzercise concentrates especially on lifting the spirit through the use of positive reinforcement, encouragement and an emphasis on "letting go" (yelling, laughing, screaming and especially smiling). It is a class that encourages each participant to be themselves, have fun through moving, and to forget about being competitive (unless it is with one's self).

In this presentation, by emphasizing the above techniques, we will

concentrate on how to motivate the exceptional individual so that they leave the classroom with a bounce in their step, a smile on their face, all the while reaffirming the positive, pleasant side of their personalities.

References

1. Missett, Judi Sheppard with Dona Meilach, *Jazzercise,* "A Fun Way to Fitness" (Books are available through the author at the session or at your local bookstore.)

The Trampoline as a Means of Movement Diagnosis and Therapy

Dr. Ernst J. Kiphard, Westfalisches Institut fur Jugendpsychiatrie und Heilpadagogik, Hamm, Germany

Since 1961, the large trampoline has been used in Germany as a device for movement coordination training with motor impaired children and adolescents. The almost magical fascination man has with this rebound tumbling equipment probably has some connection with his eternal longing to be able to fly.

Children must be allowed time to familiarize themselves with the new movement situation. They should not be put on a trampoline too early or against their will. There is also little point in an adult going on the canvas bed with the child to hold his hand. It is much better to start rocking the anxious child up and down a little while he is sitting on the trampoline. Later, the child will give himself the necessary impetus by kneeling. At the same time or later, he will stand up and carefully — but by himself — control his body with rocking and finally with jumping movements.

Soon the child will venture to let go and will move his feet in a rhythmic sequence of jumps from the canvas. Each time he does so he enjoys for a brief moment the feeling of freedom of release and weightlessness. This elevating feeling of mastering one's body in flight has a positive effect on one's self-confidence. After a short time the first sequence of exercises will be attempted. The experience of success encourages the child to more difficult feats. Finally may come the somersault, a stunt which will make the child seem almost a circus acrobat in the eyes of his friends.

113

Children never tire of practicing new bounces and combinations of jumps. In this way they not only develop heart and lungs, but also muscles and nerves. With every feat they make demands on their will-power, concentration and self-control.

Regarding pathological motor phenomena, a factor analysis identified two factors that did not appear with normal children: *instability of the upright body position* (i.e., hip flexion, zigzag position and floppy head), and *side differences* (asymmetrical use of legs or/and arms). In some factor analysis, a concentration factor was identified, but only with brain dysfunction patients.

The usefulness of the Trampoline Test was reviewed by Wehaus (1973) and Jahn (1975). A modified form met the quality criteria of one of the tests. The reliabilities ranged from .82 to .85 (with a sample of 284 children). The validity co-efficients reached a value of .53 as correlated with Backwards Balancing subtests of the Body Coordination Tests by Schilling and Kiphard (JOPER, 4, 1976, page 37).

The Trampoline Test differentiated trampoline motor behavior among three groups: normal school, special school, and children and youth in a psychiatric program. Using the trampoline evaluation, the motologist involved in motor assessment with impaired children will find important qualitative information about movement behavior and the ability of a child to adapt to unusual trampoline situations. Jahn (1975) found a re-test reliability of .85 for the total judgment "normal" and "impaired" motor coordination on the trampoline.

Directions for the Use of the Checklist

The degree of intensity with which the movement characteristics listed below are exhibited is designated 1-2-3 and recorded in the appropriate column.

1—Not Observed

2—Rarely and/or Moderately Observed

3—Strongly Observed

Description of the Characteristics

General Movement Control

Stamping: Heavy, clumsy thrusts of both legs against the bed, without sufficient use of the rebound.

Stopping: Discontinuity by involuntary, corrective disruption of the cyclic jumping.

MOVEMENT EVALUATION ON THE TRAMPOLINE

Name ..... Age ..... Date .....

CHARACTERISTIC	DEGREE OF INTENSITY	LINE
I GENERAL MOVEMENT CONTROL		
Stamping		1
Stopping		2
Falling		3
Hip Flexion		4
Zigzag Position		5
Flopping Head		6
Flabby Jumping		7
Rigid Jumping		8
Delayed Take-off		9
Side Deviation		10
Poverty of Motion		11
II INVOLUNATRY MOVEMENTS		
Jerky Arm Motion		12
Undulating Arm Motion		13
Flinging Leg Motion		14
Body Tremor		15
Facial Twitchings		16
Jerky Head Motion		17
Rotating Head Motion		18
Finger Restlessness		19
III SIDE DIFFERENCES		
Right Knee Higher		20
Left Knee Higher		21
Right Foot Takes Off Earlier		22
Left Foot Takes Off Earlier		23
Body Weight on Right		24
Body Weight on Left		25
Fall Tendency to Right		26
Fall Tendency to Left		27
Scant Arm Activity Right		28
Scant Arm Activity Left		29
IV BODY HYPERTONICITY		
Facial		30
Fixed Arm Flexion Right		31
Fixed Arm Flexion Left		32
Fixed Arm Extension Right		33
Fixed Arm Extension Left		34
Fan Position of Hand Right		35
Fan Position of Hand Left		36
Functional Clubhand Right		37
Functional Clubhand Left		38
Athetoid Hand Fixation Right		39
Athetoid Hand Fixation Left		40
Wrist Flexion Right		41
Wrist Flexion Left		42
Extension Rigidity in Leg Right		43
Extension Rigidity in Leg Left		44
Pointed Toe Position Right		45
Pointed Toe Position Left		46

SIGNED .....

Hip Flexion: Trunk flexion at the hip joint with forward inclination of the upper body; knees relatively straight.

Zigzag Position: Rapid pull up of the flexed knees with the thighs nearly horizontal after leaving the bed. Compensatory trunk flexion at the hip.

Flopping Head: Lack of head control — lolling head motion.

Flabby Jumping: Flaccid, slack, limp jumping motion.

Rigid Jumping: Lack of joint mobility — stiff, angular jumping.

Delayed Take-off: Retarded initiation of motion caused by inhibitory, antagonistic muscle tension.

Side Deviation: Poor control of balance, resulting in landing on alternate sides. Displacement of the body from the center of the bed to the left and right.

Poverty of Motion: Spacially restricted, monotonous bouncing motion with little or no take-off.

Involuntary Movement

Jerky Arm Motion: Uncontrolled, sudden "shooting out" motion of the arms, sometimes originating from jerky shoulder thrusts (choreiform).

Undulating Arm Motion: Alternate inward and outward rotating, worm-like motion of arms and hands (athetoid).

Flinging Leg Motion: Sudden uncontrolled side motion of one leg with either stiff or flopping knee. Occasionally kicking motions are observed.

Jerky Head Motion: Tossing and twitching head action in all directions.

Rotating Head: Head turning to alternate sides, occasionally as fast as head shaking.

Body Hypertonicity

Fan Position of Hand: Rigidly held fan-like abduction of the fingers.

Functional Clubhand: Fixed position of the hand; fingers together with cupping of the palm; thumb touching index finger (pincer grip).

Athetoid Hand Fixation: A rigid hyperextension of the first (carpo-phalangeal) finger joints. The distal joints of the fingers are flexed (a "frozen" athetoid motion).

The Importance of Motor-Activity as it Relates to Vision and Learning

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Of all the sense modalities used in obtaining information concerning the world about us, vision plays the dominant role. Is it possible to have 20/20 visual acuity (clearness of detail), and still be suffering from visual inefficiency? A model of vision and its interweaving relationships with other sensory processes will be presented to account for just such a possibility.

The following statment was made by Patricia McBroom: "The English language has never offered a very good fit (match) between its written and spoken forms. For reasons reaching into the misty past, English is burdened with such spelling vagaries as *s*ilo, *sigh*t, psychology, *c*yclone, cider — all for a single sound. Then there are t*r*ue, d*o*, l*ou*, br*ew*, th*rough*, *zoo*, and sh*oe*. On the other hand, a single spelling stands for *cough*, fur*lough*, *ought*, *plough*, and thor*ough*. One can only sympathize with youngsters learning to read and write." It has been observed that *ghoti* spells fish if we use the sound of *gh* in enou*gh*, the *o* in w*o*men, and the *ti* in n*ation*. Such inconsistent matches between what is seen and what is said makes spelling chaotic. Youngsters need more than sympathy!

The abundance of research material published in the past few years by members of various disciplines concerning children with learning disabilities overwhelmingly indicates a positive relationship between vision and learning. Ward Halstad is credited with the statement, "Vision

and intelligence are one and the same process. One cannot be discussed without discussing the other." To accept and understand a statement of this magnitude, the commonly accepted definition of vision must be closely scrutinized. To most, vision implies clear resolution or acuity. In the living eye only photon scatter is present on the retina, which elicits the electro-chemical reaction of the retinal receptors, sending to the brain coded neural impulses of the illumination intensities of radiant energy stimulating the retina. Vision, in this sense, is information processing which is then equated with intelligence. It has been demonstrated many times in school vision screening projects and under controlled experimental conditions that 20/20 acuity is not a prerequisite for reading achievement, although it is desirable. Quite to the contrary, an individual with high resolution or acuity can often be found to be the nonachieving child.

It is through visual development that the child gains the necessary capacities for information processing. It is the kindergarten and first grade child whose visual information processing capacities are at times overloaded due to inadequate or sometimes non-existent visual and motor guidance in the preschool years.

Vision is the dominant sense in the human because more information can be processed through this modality than any other sensory modality. Varied and specific visual experiences are essential to promote the acquisition of efficient visual motor abilities with which to interpret the visual environment. There is ample data to show that limited visual abilities may lead to deviant social behavior.

The meaning of growth and development are often interpreted as though they are synonomous terms. It is assumed their mutuality is the continuum of time. Growth is the progression of all the structures of the organism from conception to maturity. The task of the child is to grow, but growth is dependent upon inherited traits and the perils of living.

Development is the organism's response to its environment and, if left to random influences, may progress only to a certain degree. The child is ready to learn as soon as the cortex of the brain is formed. Consequently, early visual and motor guidance procedures are of extreme importance to the growing child, enabling him to amplify learning and to influence total behavior. It is the responsibility of parents to guide their child's development through planned, appropriate, visual and motor activities for the various age levels.

Our educational system is visually oriented. It is imperative that on the

first contact with children for educators to consider the visual development of the children they will attempt to teach. The child whose complex visual system is operating efficiently and economically will progress in the academic environment with little difficulty, but the child with a visual problem is frequently destined to experience many frustrating moments in a visually demanding situation. The school age child, meeting difficulties of achievement due to visual deficiencies, is first a visual problem, and secondly an educational problem.

Investigations by Luria, and others, have shown that the development of visual perception in children passes through a series of stages of information gathering, beginning with the tactual and progressing through the completely visual.

1. The tactual stage is the physical contact and manipulation of an object, combined with the inputs from kinesthesis and proprioception.

2. The tactual-visual stage is touch experience with sight inputs of a passive nature; the infant feels, tastes, manipulates the object, looks and discards it. The school age child, operating at this level, can profitably be instructed to trace a real object, trace the visual symbol of that object (provide various textures) and then reproduce it with pencil and paper. All instructions should be given orally. If flash cards are used, sufficient auditory clues should be administered. A touch, auditory, oral approach will produce a more positive response for the child.

3. The visual-tactual stage is reached when the sight input is dominant, but is supported by tactual and kinesthetic inputs. A child functioning at this level should be allowed to use his finger or a marker in reading. In this stage reading is a difficult chore. The best approach is a look-say method. Visually there will be auditory discrimination problems and definite confusion in language output. The child who cannot progress from stage two or three is unable to match the visual and auditory inputs, therefore, complete visualization or integration does not occur.

4. The visual stage is reached when all information is processed through the sight mechanism. The child operating in this stage is developmentally ready for formal learning and can be expected to learn to read with little difficulty. He will be able to match the visual inputs from his environment with the already stored speech-auditory information.

Each of the stages must be negotiated for the succeeding stage to be attained, not only in linear order, but each stage integrates the preceding

stage and paves the way for the succeeding one. It is through the utilization of visual and motor skills that the child becomes autonomous, independent and develops self-esteem.

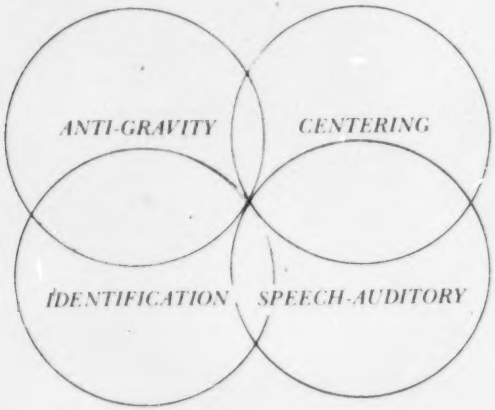
Vision and Learning

Word Variations – Sound and Spelling

*S*ilo	d*o*	*cough*
*s*ight	l*ou*	furl*ough*
*p*sychology	br*ew*	*ough*t
*c*yclone	thr*ough*	pl*ough*
*c*ider	*zoo*	thor*ough*
	sh*oe*	

GHOTI spells fish

Model of Vision



Modes of Development

A. General movement patterns
B. Special movement patterns
C. Eye movement patterns (to reduce action)
D. Communication patterns (to replace action)
E. Visualization patterns (to substitute for action and speech)
F. Visual perceptual organization

Developmental Scale

1. Tactual
2. Tactual — Visual
3. Visual — Tactual
4. Visual

Major Visual Factors Involved in Visual Perception

1. Visual acuity
2. Fixation ability
3. Accommodation ability
4. Binocular fusion
5. Convergence ability
6. Stereopsis
7. Bonocularity
8. Eye predominance
9. Field of vision
10. Form of copying ability
11. Eye-hand matching
12. Gross motor ability
13. Laterality
14. Size constancy
15. Visual memory
16. Spatial organization
17. Figure-ground relationship
18. Sense modality arrangement
19. Experience
20. Intelligence

The Human Race — An Exceptional Marathon Runner

Pete Strudwick, Author, Teacher, Film/TV/Radio Personality, Celebrity Speaker

You know, I'd like to pass as a brave man, to have folks look at me and think, "Now there's a guy who can stand up to anything." But it would be a fantasy — wishful thinking — because many things frighten me in life. Being handicapped myself and being with other people who are handicapped frightens me.

Webster's New Collegiate Dictionary (2nd Edit.) defines a handicap in two main ways: 1) "A race or contest in which, in order to equalize chances of winning, an artificial disadvantage is imposed on a supposedly superior contestant or an artificial advantage is given to one supposedly inferior" . . ., and 2) " . . . any disadvantage that renders success more difficult."

Webster's second definition is the one I favor: ". . . any disadvantage that renders success more difficult." I like it best because it doesn't go into the rigmarole of diliberately handicapping a contestant. All it says is: If things are tougher the reward is harder to get.

You know, I could almost settle for that definition, except I'm not sure a person *born* with a handicap *has* a tougher time of it. Tougher than what? How's a handicapped person going to know they've got it tougher unless someone else tells them, or unless they get to looking around and wishing they were someone else?

Remember what I just said about *when* I consider myself handicapped? It really is only when I'm with other people that I think of myself as crippled or deformed. The rest of the time I just go about my business.

152

And, in all the years I've been alive, I've always been able to do what I really wanted to do. I can count on the fingers of my hands the number of times I've quit things because I physically was unable.

Going Beyond Being Handicapped

First You Must Face the Fact

I know a specialist in a responsible position who won't use the word "handicap," although that specialist works with people who literally depend on others to see them through each day.

My specialist friend uses other words, but never the word "handicap." Now why? Well, my friend says too many of us dump people on a sort of scrap heap of humanity as soon as we label them handicapped. And what really matters is what a person *can* do rather than what he *can't* do.

You and I *have* to tell it like it is. I didn't say we have to like it; I said we have to face it.

Harry Emerson Fosdick said a mouthful when he said, "Rebellion against your handicaps gets you nowhere. Self pity gets you nowhere. One must have the adventurous daring to accept oneself as a bundle of possibilities and undertake the most interesting game in the world — making the most of one's best."

Have you ever wondered why we value physical perfection so much? I have. I think it's largely because we're lazy. We want to believe that a beautiful body is like a big bank account, and that if we had it we'd be on 'Easy Street.'

No, we hunger for physical perfection like we hunger for wealth, and they're both illusions at the end of a rainbow. Neither one is a bit like it seems from a distance. Anyway, physical perfection is mostly a matter of who your ancestors were, and I challenge anyone of you to do something about that!

Wilfred Funk warned, "If you have the idea that physical perfection is necessary to success in your chosen field, take a look at this even dozen of famous men and the handicaps that failed to (stop) them; Lord Byron had a clubfoot; Robert Louis Stevenson and John Keats had tuberculosis; Charles Steinmetz and Alexander Pope were hunchbacks; Admiral Nelson had only one eye; Edgar Allan Poe was a psycho-neurotic; Charles Darwin was an invalid; Julius Caesar was an epileptic; Thomas Edison and Beethoven were deaf, and Peter Stuyvesant had a wooden leg."

And, think about this: the history of athletic champions is so filled with

stories of personal victories over handicaps of every description that it almost seems as if *physical imperfection* — not perfection, but *imperfection,* — is the catalyst required to make a champion.

Ha — I remember how painfully self-conscious I was as a young man, how I used to walk and stand and sit so as to make my lopsided body look symmetrical. Yes, and I had a devil of a time holding my short arm and short leg and bent back and this and that and the other thing to hide the fact.

No, if you and I are handicapped then first we must face that fact, painful as it may be. Then, like Ed Guest, you can say:

I have to live with myself, and so
I want to be fit for myself to know;
I want to be able as days go by,
Always to look *myself* straight in the eye.

Now, From Fact, Will Come Greater Strength

I've noticed something about myself: very often I learn through a *painful* experience, not through pleasure but through pain. And the older and wiser I become, the more I withhold complaint about disagreeable events because I can never tell for sure where they'll lead to.

Kahlil Gibran said, "Your pain is the breaking of the shell that encloses your understanding." And I think that's right. A comfortable person can go to sleep in their cocoon. And if they sleep long enough their shelter grows hard. It has to crack if they are ever to grow again.

But — no! — you may complain, I don't want my life to crack open. I don't want to suffer! Fine, only troubled people really *want* to suffer, and the rest of us can't avoid it for long: it's simply part of living a full life.

On the other hand, you may choose not to hide from life. You may wish to go forth and live. In which case you're going to make many discoveries: some encouraging, some painful, and most of them worthwhile.

So Beware of Lasting Ease — It's a DISease!

Janet Harrison said it and I'll repeat it: "The curious thing about the tendency of Americans to cling to the notion that life ought to be 'easy' and 'secure,' that suffering is to be avoided wherever possible and grief

buried rather than transcended, is that it really doesn't correspond with our experience. . . . The times of our lives which hold the deepest meaning for us, from which we learn the most, are very often those when we are face to face with problems which seem too great for our strength, with illness, and with death."

Harry Ritter told about ". . . a legend of a comfort loving man who died and was borne to the other world where every wish was gratified. No effort, no struggle was required of him. He became bored and said, 'I can't stand this everlasting bliss any longer. I want to feel there are things I cannot have. I want to go to hell.' The attendant replied: 'And where do you think you are, sir?' "

No One Knows What Tomorrow Will Bring

Okay, let's assume that you and I are launched out into the universe, that our shells have cracked and we are growing out to meet tomorrow.

Are you frightened? I am, a bit right now, and sometimes a lot. Because no one really knows what's out there in space and time. And even the things we *know* change. You have every right to be scared as well as excited. Powerful forces — powerful things — can now reach you and change you. But the price of opportunity is exposure, which can bring good as well as bad.

Consider the True Strength of the Strong

Perhaps the strongest proof of strength is *reaching beyond ourselves*. And that the strong reach out is proof that others may too.

In fact, the more you study the relation of handicapped to whole folks, of weak to strong people, the more similar they seem. It's reasonable that the handicapped need the whole, but it's vital that the whole know the handicapped; lest one know only defeat and the other only arrogance.

Whole People and Handicapped Alike

They are but tiny atoms in all creation; and their differences are miniscule. The danger is that a person who has a handicap will be ashamed of it and waste energy trying to hide it, saying in effect, "What I *am* is wrong, and *I* should not be." And the danger is that a strong person will contaminate their strength with arrogant pride, which is just as unrealistic as shame.

So Let's Dedicate Ourselves in Body, Strength, Will and Spirit

To live life because it matters,
To befriend others because they matter;
To reach out till all our strength gives out.

"Trouble," said Oliver Wendell Holmes, "makes us one with every human being in the world."

"Why do we dread ordeal?" so, asked Lillian Smith. "Every good thing the human race has experienced was trouble for somebody. Our birth was trouble for our mothers. To support us was trouble for our (families). Books, paintings, music, great buildings, good food, ideas, the nameless joys and excitements which add up to what we call 'a good life' came out of the (trouble) of countless hearts and minds."

So . . . Today We Run. Tomorrow What?

If you and I find our heart and strength through running (or whatever our interest is), then let us run with all heart and strength.

Some may say that what we do is no big thing. But come closer, know what we do closer. Things are always more than they seem. What do you want? What do you dream?

Today we run, *tomorrow* we know
The things that today we sew:
Health and hope and reaching out.
Ah — that's what it's all about!